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ORIGINAL LECTURES.

DISEASES OF THE KIDNEYS.

A Series of Lectures delivered before the Medical Class of the University of Pennsylvania

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I.

GENERAL REMARKS—PAIN—FREQUENCY OF MICTURITION—DROPSY—QUANTITY OF URINE—COLOR—SPECIFIC GRAVITY—ESTIMATION OF THE AMOUNT OF SOLID MATTERS.

GENTLEMEN,—I need not tell you that the study of diseases of the kidneys is an extremely important subject of investigation. I know of no class of diseases to which it is so important that your attention should be directed, for they may exist for a long time before they assert themselves in so prominent a way as to force the patient to take notice of them and bring them to the notice of his physician. It is a peculiarity of diseases of the kidneys, as it is of affections of one or two other portions of the body, that they may progress for a long time without attracting the attention of the patient, and unless the physician is acute enough to investigate the matter, and possesses a practical familiarity with the subject, they may go on to an incurable stage before being recognized.

In speaking of renal diseases I shall, in the first place, ask your attention to the conditions which lead the patient to suspect that the kidneys are the seat of trouble; in other words, to the general symptomatology. It is perhaps worth while, in considering this subject, to divide diseases of the kidneys into two groups,—(1) functional affections, and (2) organic affections. These merge into each other by insensible degrees. One who has a functional affection of these organs is very apt to find, after a considerable time, that the affection has passed into an organic form, and organic disease may reveal itself by disturbances of function so slight as to be taken for merely a functional disorder, and the mistake may not be recognized for a considerable time, and not until more positive symptoms of organic disease present themselves. It is particularly in connection with nervous diseases of the kidneys that we recognize the wonderfully close relationship which exists between these organs and certain other great organs of the body, particularly the skin, stomach, and liver. This quartet are so closely associated that derangements of one constantly react upon the others. We can study no disorder of the kidneys in reference to diagnosis, prognosis, or treatment without being obliged to consider the state of the skin, the state of the stomach, and the state of the liver. It is in functional disease of the kidneys that this relationship is most closely observed.

In speaking of these symptoms of kidney disease I shall first take up those which lead the patient to think that the kidneys are affected.

Pain.—The first symptom which patients speak of is usually some pain which they refer to the kidneys; but the pain to indicate renal disease must be of a certain special kind. The pain that is commonly attributed to affection of the kidneys is rarely due to such trouble. Patients have very indefinite ideas as to the location of the kidneys: not one in twenty can put his hand within six inches of the region of the kidneys; the majority think that they are in the lower lumbar region: thus, many cases of lumbago, of fibrous rheumatism, of periostitis of the crest of the ilium or of some of the processes of the lower vertebræ, will arouse the suspicion in the minds of patients that they have kidney-disease. The pain which is really significant of affection of the kidneys is, for the most part, found over the position of these organs,—*i.e.*, high up in the lower dorsal region, on one or both sides,—and it is frequently associated with pain along the line of the ureters. Far more commonly, however, diseases of the kidneys advance without any distinct pain. There may be a sense of discomfort and of vague distress in the renal region, but the painful affections of the kidney are few; for instance, as you know, there is severe pain with renal or nephritic colic in connection with the gouty diathesis, with the uric acid diathesis, and with the presence in the urine of minute gravel, or with the symptoms of congestion or neuralgia of the kidney. These same attacks, only often more violent and associated with other symptoms, which we shall discuss at another

lecture, are present in cases of renal calculus, whether the stone remains in the pelvis of the kidney or passes through the ureter into the bladder: so that if there is pain which is severe in the renal region, and particularly if it radiates in the course of the ureter towards the bladder and into the genitals, it commonly indicates one of the conditions which I have mentioned,—*i.e.*, congestion of the kidney, with an irritating condition of the urine, the uric acid diathesis with renal neuralgia, with or without minute gravel, and, finally, renal calculus, either impacted in the pelvis of the kidney or passing into the bladder. We should be careful how we depend upon pains described so often by patients which do not possess these characters.

Frequency of Micturition. — Another symptom which is often noticed and complained of is frequency of micturition. Next to pain, this is perhaps the most commonly observed by patients. When present, it attracts attention and at once arouses alarm. Frequency of micturition is merely a relative term. Some men will hold their water for twelve, some for eight, and some for four hours. There is the same difference in regard to this as there is in regard to the movement of the bowels. As long as a person goes all night without passing his water, and urinates four, five, or six times during the day, there is no undue frequency of micturition; but when he is called to relieve himself every two or three hours during the day, and is called up once or twice during the night, it is a symptom which calls for attention. While this symptom is usually observed by the patient, yet it is curious how a person may insensibly drift into the habit of passing water frequently without alarm being excited. I have often had patients reveal on close questioning that they were passing water with undue frequency, when it had come on so gradually that they could not remember when it first began, and had supposed that it was natural.

Frequency of micturition is not a constant and infallible symptom of kidney-disease. It is more commonly attendant upon vesical than upon renal disease; yet it is often present, to a certain extent, in the latter. Extreme frequency of micturition, particularly if the amount of urine passed at each time is small, is usually indicative of bladder-trouble; but in renal affections it is more commonly a symptom of inflammation of the pelvis of the kidney and of the ureter than it is of the organic troubles which we group under the name of Bright's disease. You should always associate with inquiries in reference to the frequency of micturition the questions, How much urine is passed at each time? And what is the total amount passed in twenty-four hours? I should say that it is rare in any organic disease of the kidney to have frequency of micturition without having an excessive amount of urine passed, while in vesical troubles it is usual to have great frequency of micturition with the passage of but a small quantity of urine at each time,—not more than one or two ounces.

We should carefully study the sensations of the patient at the time that he is called to pass water. In renal disease, unless there is inflammation of the pelvis or ureter with a high degree of irritation, the frequent micturition is unaccompanied by burning in the bladder or at the end of the penis, or with pain after the act of urination. In proportion as these symptoms are marked will you find that the frequent micturition is vesical, not renal, in its origin.

Before leaving this subject, let me observe that frequency of micturition is a symptom which is present in many kidney affections. In addition to renal congestion and irritation, it is common in certain forms of acid dyspepsia, lithiasis, uric acid and oxalic acid diatheses, in certain neuroses of the kidney with polyuria, and in organic disease of these organs. You therefore see how much care must be exercised in regard not only to the frequency of the micturition, but also in regard to many other conditions, before any importance can be assigned to mere frequency of micturition as a symptom of renal disease.

Dropsy.—Patients will come to you complaining of dropsy as a symptom of disease of the kidneys. There are certain generalities about renal dropsy worth stating at the outset, for it will save time when we come to speak of the sort of dropsy present in certain organic affections.

Renal dropsy differs from cardiac dropsy in the fact that even in the early stage it is not often limited to the feet. When the patient lies down, although the effusion may leave the feet, the face is apt to become puffy, and indeed the face may be swollen before the feet. In the early stage

of heart-dropsy the swelling very constantly begins about the ankles. In such cases, as a result of some enfeeblement of the heart or obstruction to the circulation of the blood, swelling of the dependent parts takes place. When the patient lies down, the effusion re-enters the vessels and entirely disappears. In renal dropsy there is more than a mechanical element. There are, in addition, changes in the blood which make it less easy for the capillaries to pass it, and there are changes in the walls of the minute arteries and capillaries which make it easier for the serum to pass through them. There are, therefore, local conditions of the circulation present in kidney-disease which are absent in heart-disease, making renal dropsy more apt to be diffused and not limited to the lower extremities, as is the case with cardiac dropsy, so that there may be puffiness beneath the eyes when there is no swelling of the ankles. Swelling about the feet may be so slight that it is only by removing the shoe and pressing the thumb into the loose cellular tissue behind the malleolus that any œdema is detected. If you limit the examination to the spine of the tibia, you may entirely overlook the effusion. This swelling may last for a long time without increasing. Œdema is met with in many different kidney-troubles, not only in organic but also in long-continued functional disorders with vesical disease and the discharge of pus. I have repeatedly seen cases where I have been anxious to determine whether or not there was any organic disease of the kidney, where there was undoubtedly affection of the bladder, where the urine contained pus and albumen, and where œdema of this slight character had been coming and going for many months and years, but where I had never been able to find any tube-casts in the urine. As a rule, however, œdema directly connected with evidences of renal disturbance will, after a time, prove to be associated with organic disease. Œdema may, of course, appear in functional disorders as a result of the anæmia induced by the long-standing derangement of the kidneys, and by the dyspepsia which so constantly attends functional renal trouble, but it is always a significant and ominous symptom, and if it persists or often recurs justifies the suspicion that after a time we shall find evidences of organic disease. Within the past few days I have seen for the first time the characteristic tube-casts in the urine of a patient whom I have had under observation for more than twenty years, and who has had vesical trouble for forty years, with albuminous urine, and who for the past two or three years has had intermittent dropsy, puffiness of the face and ankles, coming and lasting a few weeks and then disappearing, to return after the lapse of a short time. His urine has during that time been examined over five hundred times, but never until a few days ago have I been able to discover any tube-casts.

Œdema may be an early symptom of renal disease, but more frequently it is a late symptom. It is impossible to judge of the gravity of a case by the amount of dropsy which is present, unless the dropsy becomes progressive. Increase of dropsy in renal disease is a bad symptom, except when it occurs in the acute form. In acute parenchymatous inflammation of the kidney, increasing dropsy is a prominent symptom; but this is a very curable disease. When, however, it comes on in a chronic case without any acute exacerbation to explain it, advances up the limbs, invades the arms and the cellular tissue of the trunk, it is an exceedingly grave symptom, and indicative of advancing organic change.

Alterations in the Urine.—More frequently, however, than by either pain, frequent micturition, or œdema, will the patient's attention first be attracted by alterations in the urine. Those changes which are most likely to be noticed are for the most part referable to functional disorders, while the more important changes are not observed. The alterations which mark the course of organic disease have to be revealed by the microscope and chemical tests. The changes which are apparent to the eye are dependent principally on the activity of the skin, or upon functional disturbance of the stomach, liver, or kidneys.

In order to appreciate the changes which may occur, it is necessary to have a clear idea of the characters of healthy urine and the best methods of examining it for disease. In examining the urine, attention is to be directed to the following points: the amount passed, the specific gravity of the entire mass, the amount of solid matters therein contained, its color, its odor, its reaction (whether acid or alkaline), the character of the sediment

which is thrown down on standing, the reaction of its coloring principles to nitric acid, and the presence or absence of morbid ingredients, as albumen and sugar.

Quantity.—The total quantity of the urine varies, but it bears some proportion to the body-weight of the patient. It also bears a close relation to the activity of the skin, the state of the bowels, and the condition of digestion. It therefore has relations which are too complex to enable us to draw any important conclusions from the total quantity unless the variation is extreme. What I have said needs no elaboration; but remember, when trying to determine whether or not the quantity of urine is excessive, that it bears relations to the body-weight, to the activity of the skin, to the condition of the bowels, and to the state of digestion, particularly with reference to thirst and to the capacity for digesting liquids.

We may say that a healthy man, weighing one hundred and fifty pounds, may vary in the amount of urine excreted *per diem* between thirty-two and sixty ounces without its being a symptom of any disturbance. As a matter of fact, in all individuals the amount varies between these limits, according to the season of the year, and as we have thirst and constipated bowels, or as there is little thirst and loose bowels. One or two loose stools may decrease the amount of urine to twenty-four ounces. A considerable amount of thirst with a constipated state of the bowels may readily bring the quantity up to two quarts. These are the limits of entire safety. The urine is said to be scanty if it falls below thirty-five ounces. It is excessive if it goes above two quarts. In order to determine the quantity, you will, in practice, employ an ordinary chamber-pot and a pint cup, reserving a graduated measure like the one I show you for hospital practice and in those cases where you desire to make a minute analysis. In all cases where there is a suspicion of renal trouble I advise you to have the exact quantity passed determined at intervals.

Color.—The color of healthy urine is a light amber or a straw-yellow; it is, however, perfectly evident that the color will depend upon the period of the day, the state of digestion, and the concentration of the liquid, as determined by the activity of the skin and the condition of the bowels. Urine passed in the morning, after the patient has been warmly covered in bed, with the body quiet and the skin active for a period of eight or ten hours and not having taken any liquid, is concentrated, and, as a rule, more highly colored than the urine of any other portion of the twenty-four hours. On the other hand, urine passed after a meal in which a considerable quantity of liquid has been drunk is light-colored. Exposure to the wind soon after taking liquids will cause the urine to be of a light color. In order to obtain an idea of the real color of the urine, it should be the color of the combined mass of urine for twenty-four hours.

The coloring-matters of the urine are very complex, and they are liable to be affected in different conditions of disease. The study of the color of the urine is therefore an important matter. As in speaking of the individual affections of the kidneys I shall not have occasion to speak very carefully of changes in the color, I shall now say a few words in regard to these alterations.

I need scarcely allude to the fact that one of the most common changes is due to the admixture of the bile. This may be present with or without jaundice. When there is jaundice the urine is always bile-stained, but the urine may contain bile when no jaundice can be detected: thus the presence of bile in the urine becomes an important indication of engorgement of the liver, even when there is not sufficient obstruction of the bile-ducts to cause actual jaundice. The presence of bile in the urine is determined by the naked-eye observation and by the chemical test of pouring a few drops of urine on a white plate, adding a little nitric acid in the centre and watching the play of colors, violet, red, blue, and indigo, in circles from the centre outwards. This test is delicate enough for all ordinary purposes.

The urine becomes unduly dark in cases where the blood-globules are undergoing rapid disintegration. This color is different from that produced by the presence of bile, but may be mistaken for it: it is an intensification of the natural color of the urine. The liquid becomes of a dark sherry or brandy tint. This is dependent not only upon excess of the coloring-matters, but also in some cases upon morbid changes in these matters. It will often be found that the addition of nitric acid to a specimen of urine will cause a rapid change

of color to a deep brown, the urine at the same time remaining perfectly clear. This indicates a morbid state of the coloring-matter, and is commonly associated with rapid disintegration of the blood-corpuscles and with deranged liver-action. This is often met with in cirrhosis of the liver. It is sometimes of diagnostic value, existing before the disease has advanced to a recognizable stage.

The color of urine is often lighter than natural. It is then spoken of as pale or whey-colored. It may be so pale that it is proper to speak of it as colorless. Paleness of the urine may mean one of several things: it may merely mean that there is too much water mixed with the right amount of coloring-matter, simply meaning, therefore, polyuria. The urine is also pale in cases of extreme anæmia, even where the quantity is not excessive. It is pale and usually copious in various neuroses, as after an hysterical paroxysm. It is important to remember that it is often pale in albuminuria, not only in consequence of the excess of water, but also because there is an actual deficiency in the amount of coloring principles present. Lastly, it is not uncommon, although not so constant as in albuminuria, to find the urine rather pale in diabetes. Let it, however, never be forgotten that in neither of these grave diseases need there be the slightest change in the appearance of the urine, and that the color of the urine in the most hopeless type of renal disease may be just as clear and healthy as that of the urine in the bottle which I hold in my hand.

Specific Gravity.—The specific gravity of the urine is determined, as you know, either by taking the specific gravity of one or two specimens or by collecting the urine for twenty-four hours and taking the specific gravity of the entire mass. According to the disease which we are investigating, we pursue one or other of these methods. In some affections the density of the urine should be determined from the entire quantity. This is particularly true of polyuria and of glycosuria (diabetes). In other instances it is sufficient to obtain the specific gravity of one or two specimens taken at different periods of the day. We usually examine the urine which is passed in the morning; but it is to be remembered that this possesses the highest specific gravity of any specimen in the twenty-four hours. When we suspect that there is an undue amount of organic or inorganic matters thrown off by the kidney, as in cases of defective primary assimilation due to gastric or hepatic trouble, and we desire to estimate the waste, the morning urine should be obtained. Its specific gravity is an important indication of the severity of the functional disturbance; but in such cases this examination should be checked by collecting the mid-day urine and taking its specific gravity. Under such circumstances you may find the difference between the two observations to be as between 1032 and 1022, or as between 1028 and 1018. It is, therefore, clear that in determining the specific gravity of diabetic urine it would be impossible to do it accurately unless a specimen from the total quantity is obtained.

You are all familiar with the apparatus used in determining the specific gravity. I would simply mention that in reading off the specific gravity you should not take the highest line of the liquid, for it is drawn by capillary attraction above the exact level. The reading should be made between the upper and the lower line.

The extremes of specific gravity are as great as the differences in color. The specific gravity may be as low as 1001. This I have repeatedly seen. There is then a small amount of solid ingredients to an enormous amount of water. More commonly the specific gravity in polyuria is 1005 or 1007. A specific gravity that is pretty constantly about 1010 or 1012 is frequently associated with chronic interstitial nephritis and albuminuria. A specific gravity from 1015 to 1025 is normal. A specific gravity of 1025 to 1030 or 1032 is often associated with that condition of excess of the organic and inorganic matters of the urine, as urates, phosphates urea, and urea, which is so commonly associated with defective digestion and imperfect liver-action. A specific gravity between 1032 and 1075 indicates diabetes; but diabetic urine may not be above 1020. This is, however, unusual. By observing the specific gravity our attention is directed to the probable condition; but we of course would never form an opinion from the specific gravity alone.

Estimation of the amount of solid ingredients.—A pretty correct idea of the amount of solid matter in any specimen of urine may be obtained by the following simple rule: multiply the number by which

the specific gravity exceeds 1000 by 2. This gives the number of grammes of solid matter contained in 1000 cubic centimetres of urine.

If the specific gravity is 1020, there will, according to this rule, be 40 grammes of solid matter in each 1000 cubic centimetres. If the amount excreted during twenty-four hours is forty ounces, which equals about 1200 cubic centimetres (1000 cc. = 33⅓ oz.), the total amount of solids would be 48 grammes. Again, suppose a patient with polyuria is passing 200 ounces (about 6000 cc.) of urine, with a specific gravity of 1005, in the twenty-four hours, we should have the following:

$5 \times 2 = 10$ grammes in 1000 cubic centimetres.

$10 \times 6 = 60$ grammes in whole amount of urine.

As each gramme equals about 15 grains, the amount of solids in the case I have supposed would be 900 grains,—rather a high figure for the total amount of solids in a day's urine.

This method is, of course, not as accurate as evaporating the urine to dryness and weighing the residue; but that plan is troublesome and disagreeable, and is rarely adopted in practice.

I shall continue this subject at our next lecture, and, after showing you how to complete the examination of the urine, devote the hour to a study of the functional diseases of the kidneys.

ORIGINAL COMMUNICATIONS.

CANCER CURED WITHOUT THE KNIFE—THE OPERATION A SUCCESS, BUT THE PATIENT DIES—REPORT OF THE TRIAL OF A TRAVELLING CANCER-DOCTOR FOR MANSLAUGHTER.

Communicated by Dr. C. W. De Lannoy, M.D., of Chester, Pa.

THE result of a recent trial in this State, in which a travelling cancer-doctor was charged with causing the death of an old lady, it is believed possesses points of peculiar interest to the profession, and is therefore placed upon record here. The case was that of the "Commonwealth *vs.* Dr. Samuel Gast," before the Delaware County Criminal Court, March term. The defendant being tried for manslaughter, the jury found a verdict of "not guilty," and discharged the prisoner.

The facts are briefly as follows. Gast, who hailed from Iowa, visited Chester and filled the newspaper with laudatory notices of his wonderful cures of cancer "without the use of the knife." Among others, a farmer's wife, Mrs. A., 78 years of age, suffering with a small superficial ulcer which was located in the left infra-mammary region, fell into the toils. After the treatment, and as a result of it, an immense ulcer developed upon the right side of the chest, and she perished from hemorrhage and exhaustion. The case was referred to the coroner, whose physician, Dr. Jefferis, assisted by Dr. J. L. Forwood and myself, reported the following at the inquest as the result of our examination:

Autopsy.—The body was that of a fleshy woman, thoroughly frozen. Over the left side of the chest-wall was a blood-stained wound of the following dimensions: beginning its outline at a point two inches to the right of the median line, over the second rib, running diagonally upwards to a point one-half inch above the left sterno-clavicular articulation, thence proceeding in an oblique direction to the upper border and middle of the left clavicle, from this point curving outwards to within half an inch of the head of the humerus; here the outline dipped down into the axilla, and proceeded backwards, reaching to within one inch of the external scapular border; from thence it proceeded irregularly downwards, describing a half-circle, until on a level with the seventh rib. From these remote posterior limits the outline proceeded around and across the front of the chest to its starting-point, including the nipple and about one and one-half inches of skin below it.

The diameters of the wound were as follows. From a point over the right second rib to the extreme posterior limits, eleven and three-fourths inches. From the middle of the clavicle to the lower border of the wound, nine inches. Surface-area of ulceration, seventy-eight and one-fourth square inches (approximatively). The removal represented the entire thickness of the integument, and about one-half to three-quarters of an inch of subcutaneous adipose tissue.

We were also shown a jar of alcohol bearing the following inscription: "Dr. Samuel Gast, of Princeton, Scott Co., Iowa, removed the within cancer from off Mrs. A., without the use of a knife." The jar in fact contained a huge plaque of skin, with irregular edges, long dog-ear appendages, and button-holes. This trophy of Dr. Gast's surgical skill we identified

as having occupied the location of the wound described: the amount of shrinkage produced by alcohol on the one hand and freezing on the other had at first given rise to some doubt in this direction. Satisfied with the genuineness of the piece, we then looked for evidences of disease, and found that about five inches from the nipple, on the line of and a little below the axillary border, was an ulcer about the size of a three-cent piece, and extending from this about two inches in a horizontal direction towards the sternum was some thickening of the integument: no further evidences of disease could be detected by the unaided eye.

Passing then to the general examination of the body, we found no axillary glandular involvement, and all the viscera in an extraordinarily good condition: there were even no pleuritic adhesions, so commonly met with in autopsies, and the senile changes which might have been reasonably looked for in a woman of her years were entirely absent. In fact, except a few cysts beneath the capsule of one kidney, nothing pathological could be detected.

As the result of the above autopsy, we gave our opinion "that Mrs. A. came to her death in consequence of the large ulcerated wound which was inflicted upon her chest." Knowing little or nothing of her history after the operation, it was our opinion that she had yielded to the exhaustion consequent upon hemorrhage, pain, and the serious nervous phenomena which follow extensive surface-injuries. Besides this report, Dr. Forwood was able to add some important information, as the deceased had been a patient of his. He stated that about one month previous to Gast's operation he had examined her chest, found the mammary gland free from tumor, and had seen the superficial skin affection alluded to: it had only troubled her when she was very warm, and then only by a sense of itching, no pain having been spoken of. He informed her husband at that time that it was probably malignant, but at her age would not give much trouble, and further urged him never to mention to her the word cancer, as the resulting mental disturbance would affect her general health, which was at this time most excellent. This was the last time he saw her alive.

A graduate of a Philadelphia Eclectic college testified that he had been called to see her several days prior to her death. He had met Gast on a previous occasion, and had talked with him concerning his wonderful "cancer test;" he desired to strike a bargain with him and obtain possession of the remedy. He further stated that the patient when seen by him was a very sick woman. He then proceeded to describe a most anomalous condition of affairs, claiming that upon one side of the body there was "no circulation, on the other very much circulation;" he prescribed a mixture of aconite and belladonna "to relieve the inward fever," but he did not see the wound. Another witness testified that this doctor was the consulting physician Dr. Gast preferred, as he feared any other might, through feelings of jealousy, administer some poisonous drug. The regular physicians present were questioned by the jury as to the possible justification of this terrible removal of flesh, and united in condemning it. After all the testimony had been heard, the jury agreed on a verdict of involuntary manslaughter, and a warrant for the arrest of Gast and his accomplices was issued. Gast was accordingly apprehended at Bellefonte, Pa., where he was diligently working the same game.

After hearing the medical testimony, Judge Clayton held him to appear under bail at eight hundred dollars. A clergyman who had paid Gast seventy-five dollars for removing four cancers from his face exhibited his much despoiled countenance, and had Gast rearrested for malpractice, the judge placing the bail in his case at one thousand dollars. The accomplices of Dr. Gast were turned loose, but in default of bail the culprit was returned to prison. I would now like it noticed that the coroner's jury, composed of intelligent men, and Judge Clayton at the hearing just reported, found no trouble in reaching a conclusion as to the man's indictability, after hearing all the evidence. When the case came before the grand jury, a true bill was likewise found without any hesitancy.

When the case was called for trial, however, every attempt was made by the defence to cast ridicule upon the testimony of regular resident physicians of Chester, Drs. Forwood, Jefferis, and myself, and to discredit the direct and confirming evidence of the prosecution, which showed that the murdered woman had been in excellent health, with the exception of a small patch of skin disease, before she had fallen into the hands of the defendant; that he had

applied something to the sore to "burn it out," and had removed a large skin-slough of about seventy-eight inches in area, which had been preserved in alcohol and was presented at the trial; that microscopical examination had failed to show the presence of cancer-elements, the original wound being simply a chronic ulcer; finally, as the result of this sloughing with attendant pain and hemorrhage, she had died.

Having had the duty assigned to me of making the histological examination, I had prepared some two hundred and fifty sections, and presented a number of these at the trial, together with micro-photographs, which were placed in contrast with others of epithelioma and of normal skin. I then stated on the stand that the comparison revealed that the disease was not skin-cancer, or epithelioma, but simply a condition of infiltration, such as would be found in ulcers, or in any skin inflammation of a chronic character. I pointed out the fact that the second photograph represented diseased or infiltrated fat, and that, as this particular portion was taken from the deepest stratum of the piece removed, the operator, while making an extensive surface-removal, had evidently failed to eradicate all the disease, by not going deep enough. In order to ascertain how much of the seventy-eight and one-fourth square inches was diseased, I began my examination beneath the spot above referred to; then, by taking out slices in a radiating manner, going out from this centre towards every point of the circumference, I ascertained that the outline of originally diseased tissue included about three square inches, the remaining seventy-five and one-quarter square inches being perfectly healthy skin. It is thus seen that, had any operation at all been justifiable, the destruction of tissue in this case was twenty-five times greater than was necessary.

By the defence I was severely criticised as to the thoroughness of my examination. As I had stated that the sections were about $\frac{1}{1000}$ to $\frac{1}{800}$ of an inch thick, and that two hundred and fifty of these had been examined, the attorney for the defence delivered himself of the following brilliant idea: Estimating the average surface-area of the sections as a quarter of a square inch, he declared that only one-quarter of a cubic inch had really been seen, and that this fraction represented all that was known of the entire piece. To the uninitiated jury this argument appeared plausible, but I explained it away by stating that, knowing the general anatomy of healthy skin, as a geologist understands the laminated arrangement of rocks, the sections which were made (two hundred and fifty, or about three observations to the square inch of tissue examined) would teach all that was needed to be learned from the piece examined.

The defence was such as might have been expected, but it is so amusing that it may be given somewhat in detail.

There were called to the stand a series of persons who either knew of cancers successfully removed by the defendant, or had themselves been subject to his treatment and represented cures. Among the latter three cases bore large marks of contracting cicatricial tissue involving the inner canthus of the eyes, the tear-ducts being completely obstructed, and a red everted condition of the lower lids existing (ectropion): when asked about this, they indignantly explained that it was the result of cold, and not of maltreatment.

The prosecution inquired of each person who knew of cancers cured by Dr. Gast, whether they had any personal knowledge of medicine, and, if not, "how they knew that these sores were all cancerous." The answer invariably was, "Dr. Gast said so." Some of his patients claimed to have had four or five taken from remote parts of their bodies, leading one to believe that in Iowa the disease was a sort of general eruption; in attestation they would show the broad flat cicatrices of extensive surface-cauterization. All of these cases attest to the fact that Dr. Gast limited his operation simply to a removal of the skin. Another lady in Chester, upon whom he operated, was afflicted with a mammary carcinoma; in her case he removed the integument covering the cancerous mass, and converted it into a large ulcerated cancer. This lady is at the present time very ill.

David Gast, nephew and student of Dr. Gast, when cross-examined as to his knowledge of cancers, said that he relied upon the "test medicine"* for a diagnosis. He

* Two forms of remedy were employed in the treatment of Dr. Gast. The "test medicine" was used only in diagnosis: it was applied to the suspected surface, and the cancer and its "roots" would turn black shortly afterwards: it was claimed that it had no action upon healthy skin. The caustic was then applied in the form of a paste, and packed

gave the following highly original classification of cancers. There were, he said, spider cancers, rose cancers, black cancers, and cauliflower cancers, all of which would react to the "test medicine."

The attorney for the defence gave a remarkable specimen of forensic eloquence, which deserves to be preserved, as it shows that a knowledge of human nature is of more service in medico-legal cases than familiarity with pathology. He based his argument upon an attack upon the physicians, whom he represented as the real prosecutors, hiding beneath the cloak of the commonwealth. He sustained the theory of "cancer roots," and endorsed a charge made against the doctors of having removed them from the alleged cancer shown in court. He told the jury that "one day while walking through Media he saw a strange dog running down the street, as if anxious to escape pursuit. Very shortly afterwards a whole tribe of Media dogs came up and pounced upon him, allowing the poor fellow barely to escape with his life. No sooner, however, had they thrashed this poor stranger than they began to fight among themselves. It is thus with the Chester doctors and poor Dr. Gast." This gem was highly effective with the jury.

The argument for the prosecution was merely a brief review of the evidence.

Judge Clayton's charge was fair and impartial. He said that in this case everything hinged upon two points: "first, whether Mrs. A. came to her death as the result of the operation directly; and, second, whether that result was attributable to the lack of that professional knowledge which all physicians, whether regular or irregular, are by law presumed to possess. The testimony of the very competent, careful, and skilful physicians is of great importance, especially that of Dr. De Lannoy: he could have had no motive whatever in bringing about the conviction of Dr. Gast. A task had been assigned him, and you have noticed the great care with which it was done. It is all that the best medical expert evidence could be."

The jury retired, and returned shortly with a verdict of "not guilty"(!)

The physicians connected with the case—viz., Dr. Jefferis, Dr. Forwood, Dr. Dickinson, Dr. Milner, and myself, all graduates of either the University or Jefferson College—united in the expression of the opinion, "That, even had the whole mass really been cancerous, the operation was in no wise a justifiable one; and, as the microscope revealed only a small amount of disease, and that of a benign nature, such severe operative interference was wholly to be condemned." This plain and unanimously-expressed condemnation coming from five competent professional men in a single community, together with Judge Clayton's charge, should go on record in connection with the finding of the jury, among other curiosities of medical jurisprudence, as an illustration of the scant courtesy which the profession may expect in any attempt to shield the community from quackery.

under the edges of a sore with wooden paddles, the result being the separation of a slough, which Dr. Gast asserted was the cancer, "removed without the aid of the knife." The pain and hemorrhage accompanying this process were treated by "powwowing."

FÆCAL IMPACTION OF FOUR MONTHS' STANDING — INTESTINAL OBSTRUCTION, AND CONSTIPATION FROM BIRTH.

Read before the Philadelphia County Medical Society, March 21, 1883,

BY DE F. WILLARD, M.D.,
Surgeon to the Presbyterian Hospital.

X., COLORED, male, æt. 40, obstinately constipated from infancy; mother states that his first passage was twenty days after birth, and then only by repeated cathartics and enemata, although there does not seem to have been any occlusion of the anus. After this, while nursing, he averaged two or three stools per week, but after weaning the difficulty of securing evacuations increased, and at the age of ten his mother's habit was to give him a large dose of some cathartic medicine about once in ten days and thus secure relief.

At fifteen he rarely went to stool oftener than once in two weeks, and then only on account of artificial stimulation of intestines. At twenty he entered the army, and the difficulty increased until the interval was from three to five weeks.

At one time, while in the service, he states that after two months of constipation he was seized with violent pains and was in hospital for six weeks, apparently from an attack of slow peritonitis.

From that time to the present the period between each stool has been gradually

lengthening, until during the past eight years he has usually waited from three to four months, when, the distention and discomfort becoming great, he would leave work and devote himself to cathartics and injections for three or four days, until the Augean stables were cleansed by the passage of about a water-bucket full of fæces. This process was one of such great pain that it usually left him very feeble and exhausted for several weeks afterwards. During all this time his appetite and digestion seem to have been good, and he was able to attend to his duties as janitor of a building, except at the seasons above stated.

It would be much easier to mention the cathartics which he had not tried than to enumerate the various ones employed. At frequent intervals, and in the hands of many physicians, he had wellnigh exhausted the list.

Upon visiting him, four weeks before his death, I found him writhing with pain in his abdomen, semi-delirious, feeble, exhausted, and exhaling a plainly-discernible but not excessive fæcal odor. He had now had no passage for nearly four months, there having been none of the usual diarrhœa accompanying impaction, and he had been in pain for about a week. His lips were pale, his eyes shrunken, and his body much emaciated. The tongue was dry, and the pulse feeble, but normal in frequency. The abdomen was very tender, and peritonitis of a slow type was present. Vomiting was slight, and, while somewhat excrementitious, was not decidedly stercoraceous. The abdomen was found to be filled by an immense solid tumor, apparently nodulated and lobed, suggesting carcinoma. On close palpation this tumor was resolved into a central irregular mass, with lobes, and, examining these more carefully, an enormous tube filled with a doughy mass could be traced from the left inguinal region into the latero-anterior lumbar, to the hypochondriac, across the epigastric, and down into the corresponding regions of the other side, where at the cæcum it joined the central tumor, the convolutions of which could be traced irregularly throughout the entire middle portion of the abdomen.

The large intestine seemed to be of about the size of a muscular man's upper arm, say four or five inches in diameter, while the central group of small intestines closely resembled a coiled mass of unlinked sausages.

The entire absence of fat in the abdominal walls made each portion palpable, and by hard pressure a piece of intestine could be pinched up and its doughy contents indented.

The finger, passed through a normal anus, revealed no strictures, but an enormous rectal pouch filled but not densely impacted with fæces. There were no herniæ, and no hard nodules of a malignant character could be discovered.

In order slowly to unload this distended bowel and relieve pain, the patient was ordered a pill containing colocynth, opium, nux vomica, stramonium, and belladonna, given in small doses, and repeated every two hours, large injections of weak salt water to be commenced at the end of ten hours. At the expiration of twenty hours, during which time the patient was much more comfortable and slept considerably, the first instalment was obtained in the shape of a wooden water-bucket two-thirds full of semi-solid fæces; another half-bucket followed that night, and a large-sized chamber *full* on each of the succeeding four days,—the pills having been diminished after the fourth day, and three grains of calomel given for one day in divided doses.

Fever diminished, vomiting ceased, appetite returned for a few days, and he was able to sit up for an hour or two. His tongue, however, remained dry, and the pulse and temperature continued above 100. The abdominal tenderness was still marked, and, as the intestines could be felt through the emaciated abdominal coverings, they could be distinguished to be decidedly thickened. The "tumors" had disappeared, and the belly was flat, although still tender and painful. From this time the peritonitis very slowly but steadily increased, typhoid symptoms soon supervened, and he died in twenty-eight days from the date of my first visit.

On examination, after death, a slightly increased amount of serum was found in the abdominal cavity; the peritoneum was reddened, and thickened, but showed no purulent deposit. At several places were whitened, dense deposits, and at the point where the transverse becomes the descending colon a band of old inflammatory tissue stretched across the tube, constricting it to the diameter of one inch. This narrowing

would not have seemed so marked had it not been for the enormous dilatation of the intestines, both above and below the band. The colon throughout its entire extent, save at the point mentioned, was increased until it resembled that of the ox, being when fresh twenty-one inches in circumference at several places. The sigmoid flexure and the rectum were of similar size, and were all nearly empty, the only contents being a small amount of semi-fluid fæces. The walls were thickened, dense, and deeply congested. The ileum was of the size of the normal colon, and the jejunum was also dilated to a small degree. At several points Peyer's glands were ulcerated and threatened speedy perforation. There was no tumor, no malposition of organs, no disease of stomach, liver, or spleen. The pelvis was entirely clear from growths, and the rectum was unobstructed: in fact, there was nothing to interfere with the free passage downwards of intestinal contents, save the band above mentioned. This sprang from the upper left lateral lumbar region, and passed over and in front of the colon like a bridge, to fasten itself again to the parietal layer of the peritoneum about two inches higher up. While interfering with the free passage of the contents, it by no means closed the calibre, and liquid fæces passed through it with ease; in fact, there would seem, from its size, to be no difficulty even in passing large scybalous masses. The hardened tissue of the band was very dense, but I could discover nothing to determine positively its age. Whether it had existed from birth or was the product of various slow inflammatory attacks could be only conjectured, as the history was meagre. That it had never been more complete in its constriction than at the present time was evidenced by the fact that the dilatation of the tube below this point was as great as above, if not greater.

My theory of the constipation would, therefore, be that this band was due to intra-uterine inflammation, or to some adventitious tissue, which interfering with and arresting the normal peristalsis at this point, the wave could not reach the sigmoid flexure and rectum and proper expulsive efforts were hindered. Constant accumulation led to dilatation as a result, which dilatation became in itself a cause of further enlargement, since stretched muscular tissue is always incapable of acting properly. Cause and result thus acting and reacting, distention and relaxation were the natural sequences. The musculares mucosæ and the unstriped muscular fibres, both longitudinal and circular, throughout the entire extent of the colon gradually became less and less able to propel the contents onward, and could be roused into action only by vigorous cathartics or by excessive liquid exudations. This adventitious band may have arrested the peristaltic wave more effectually than does the so-called "third sphincter" of Chadwick, since the latter encloses circular muscular fibres in its two semicircular folds of mucous membrane, while this was simply a rigid mechanical obstruction. To have operated upon this man, with his previous history in view, and with the solidly-filled intestines already arousing peritonitis when first seen, would have been simply a cut in the dark, without reasonable hope of benefit.

TWO CASES OF TRAUMATIC TETANUS.

BY G. E. DE SCHWEINITZ, M.D.,
Late Resident Surgeon in the University Hospital.

THE following cases of tetanus were treated in the surgical wards of the University Hospital, under the charge of Prof. John Ashhurst, Jr., while I served as his resident in that institution:

C. M., æt. 34, was admitted to the surgical wards June 2, 1882, and gave the following history. Four days previously, while working in a machine-shop, he received a slight lacerated wound of the middle finger of the right hand. The wound was treated and the case progressed satisfactorily for two days, when he began to notice slight stiffness of the jaw and muscles at the back of the neck, while swallowing was attended with difficulty. His physician advised him to apply for admission to the hospital, and he accordingly came and was received on the day named.

His condition on entrance was as follows: decided trismus, so that the jaws could only be separated for a distance of about one-fourth of an inch, rigidity and spasm of the post-cervical muscles, difficult deglutition, which indeed was impossible except for liquid food, and on the distal phalanx of the middle finger there was a small, sloughing wound, with unhealthy edges, which exuded a few drops of pus.

The progress of the case is recorded from the notes which I took at the time in my capacity as resident surgeon:

June 2, 3 P.M.—Finger freely laid open and a laudanum poultice applied. Full doses of chloral hydrate; nourishing liquid food.

June 3.—Pain somewhat better. During the night three slight convulsions, rigidity of the abdominal muscles, constant tendency to opisthotonus. Continue treatment, and add one-twenty-fourth of a grain of sulphate of eserine hypodermically every three hours.

June 4.—Rested more comfortably during the night until about six P.M., when a severe convulsion occurred. Opisthotonus more pronounced; unable voluntarily to void urine; catheterization difficult, on account of tendency to spasm which it produced. About noon, no improvement having taken place, the injured finger was amputated at the joint above, and the wound allowed to remain unclosed and dressed with pure laudanum. Continue chloral, and increase sulphate of eserine to one-twelfth of a grain every three hours. 6 P.M.—Less rigid than during the morning; expresses himself as more comfortable, and takes nourishment more readily.

June 5.—Improvement has continued. Jaw has relaxed so that two fingers can be placed between the teeth. Voluntary passages of urine during the night and to-day. Bowels freely opened by an enema; pupils contracted. Continue treatment, increasing sulphate of eserine to one-twelfth of a grain every two hours.

June 6.—Improvement has continued. Jaw has relaxed still further, and general muscular system more flaccid. Myosis continues. About six P.M., without any marked unfavorable change, was suddenly seized with a severe general tetanic convulsion. Convulsions continued to appear during evening and night, and were only controlled, or rather lessened in severity, by the free use of inhalations of nitrite of amyl. Continue treatment, and increase sulphate of eserine to one-eighth of a grain every two hours.

June 7.—Not much change for the better, and apparently no cause can be discovered for the unfavorable change. Wound looking well. Increase sulphate of eserine to one-fourth of a grain pro re nata. Convulsions still frequent. Deglutition impossible, and rectal alimentation necessary. Physical signs of hypostatic congestion of lungs over both bases.

June 8.—Convulsions during night less frequent, although unimpaired in severity. Nitrite of amyl of little avail to control them. 6 P.M.—Has failed very much, and is much exhausted. 8 P.M.—Death after a severe convulsion, respiration ceasing before cardiac action.

The second case was admitted on the same day as the one just detailed, and is as follows:

J. McG., æt. 10, was brought to the hospital, having just received an extensive lacerated wound of the left thigh by being caught in an elevator. The wound began near the apex of Scarpa's triangle, and extended outward and downward across the posterior part of the thigh to its inner aspect, and almost joined its origin anteriorly. The length of the wound was eleven inches. The fascia lata was everywhere exposed, and the skin and superficial fascia dissected up like an irregular cuff above and below. There was little or no hemorrhage, but much fine dust had soiled the wound. After thorough cleansing, a few interrupted sutures were introduced, the edges supported with adhesive strips, and the whole dressed with laudanum and placed at rest in a long fracture-box. The progress of the case was entirely satisfactory until early in the morning of the third day after admission, when unmistakable signs of tetanus manifested themselves. No especially unfavorable symptoms had appeared as prodromes, except perhaps that for some hours preceding the attack he had complained of epigastric pain. The onset was sudden, beginning with pain in the muscles at the back of the neck. Trismus was soon fully developed, and the countenance distorted into the *risus sardonicus*, or tetanic grin. Marked opisthotonus and convulsions rapidly came on, and every well-known symptom of tetanus appeared with unusual violence. The disease was essentially acute, and the prognosis necessarily most grave. The reflex excitability was greatly heightened, and the slightest peripheral irritation was sufficient to provoke a most alarming convulsion, during which life was threatened from apnœa.

The treatment during the first twenty-four hours was the same as that practised in the case just detailed, the doses of the depressomotors being regulated to suit the age of the patient, although as much as one-eighth of a grain of the sulphate of eserine was twice administered without producing any effect. At the end of that time the alkaloid was suspended, as not the slightest alleviation in the symptoms had occurred, and full doses of bromide of potassium during the day and chloral at night were given, together with nitrite of amyl and chloroform by inhalation during the convulsions. All treatment proved futile, and at the end of forty-eight hours from the beginning of the attack the case came to a fatal termination, death occurring during a prolonged convulsion from spasmodic asphyxia.

As in both of these cases the therapeusis was of a mixed nature, it is of course difficult to determine the value of any one of the medical agents. Certain it is, however, that in the first case no decided alleviation of any of the symptoms occurred until the hypodermic injection of the sulphate of eserine was practised, and then not until the drug had been given at the rate of gr.

⅔-gr. i in twenty-four hours. At the same time, it must not be forgotten that the improvement followed amputation of the injured finger, which may also have been a factor in the case and have aided in the sense of a removal of a peripheral irritation. The improvement lasted about forty-eight hours; and, even after the unfavorable symptoms had returned at the end of this time, although the drug was unable to control them again, it still seems to have had power enough, when the dose was augmented, to lengthen the intervals between the convulsions, while it failed to lessen the severity of each individual spasm. The physiological action of the drug upon the pupil usually manifested itself about one-half hour after administration, but the myosis was not constant until the dose had been increased to gr. $\frac{1}{12}$ every two hours. In Case II. no effect from the drug was obtained, either by relief of any of the symptoms or by the manifestation of its physiological action. In regard to the proper amount of the alkaloid of Calabar bean to administer, gr. $\frac{1}{15}$ is said to be a moderate dose for an adult (H. C. Wood, Therapeutics, 4th ed., p. 327), while Bouchut has found that gr. $\frac{1}{20}$ will produce very decided symptoms in a child. I think the distinguished author just quoted regards this quantity—*i.e.*, gr. $\frac{1}{15}$—as a very full dose, and does not advocate its employment in such amount in the healthy adult. Certainly gr. $\frac{1}{12}$ every two or three hours, even in a severe case of tetanus, was able to produce rather permanent myosis and relaxation of the abdominal muscles, without, however, inducing any tendency to syncope, an unfortunate manifestation which has been reported as occurring during the free administration of the drug in the treatment of tetanus. Many cases of tetanus have been treated with this drug, with very varying degrees of success. Dr. B. Roemer (*St. Louis Medical and Surgical Journal*, 1873, p. 367) has collected forty-seven cases, with twenty deaths. Fenwick, Franzolin, Laborde, Valdivieso, Tyson, and Johnson have published cases terminating fatally, while Duncan, Fenwick, Newman, Keen, Packard, Cunningham, Watson, and Le Cato report others which ended in recovery. In all these cases either the bean or its extract or tincture was employed, sometimes alone and sometimes either in conjunction with or after other medication had failed. The alkaloid would seem to be preferable, on account of its certainty, and also because by its use hypodermically the result would more quickly be obtained, and any disturbance of the stomach or the production of diarrhœa, as in a case recorded by Dr. Ashhurst, be avoided. Calabar bean would seem, from many of the cases reported, to be more acceptable in such instances as are chronic or subacute in character, and not to be so useful in the acute forms of tetanus, in which, indeed, no one remedy probably affords the best chance for recovery, although in Dr. Watson's report (*Glasgow Medical Journal*, 1869, vol. i. p. 54) of eight cases, with six recoveries, he says "they were all acute traumatic cases, some of them severe, and all warranting unfavorable prognosis."

1330 Spruce Street, Philadelphia.

NOTES OF HOSPITAL PRACTICE.

ORTHOPÆDIC HOSPITAL.

CLINIC OF S. WEIR MITCHELL, M.D.

Reported by Dr. Browning, Resident.

CASE OF HYPERTROPHIC PARALYSIS.

DR. MITCHELL considers it probable that this case originated in an attack of typhoid fever. Since, however, some forms of more or less acute spinal disease are at times confounded with fevers of low type, he does not regard this as certain. No permanent treatment was attempted.

Mrs. M., æt. 33, an American, married, and has had one child. The patient's paternal grandmother had paralysis consequent upon cerebral hemorrhage. Her father died of tubercular disease. All the other members of her family enjoy perfect health. With the exception of the acute diseases incident to childhood, the patient's health was perfect until she was fourteen years old, when she had typhoid fever, from which she but slowly recovered. During her protracted convalescence from the fever her friends noticed a decided waddling in her walk, with considerable drooping of her body to the right side, and, although this defect occasioned much remark, she claims to have scarcely noticed it herself, nor did it cause her any inconvenience. As she gained in strength, however, the peculiarity of her gait noticeably diminished, although she thinks it never quite disappeared. She was married when

eighteen years of age, and a little over two years later gave birth to a child.

Shortly after this time she again began to notice a certain unsteadiness of gait. This gradually increased during a period of four years, by which time she was fully aware of a decided loss of power in her legs, accompanied by a certain amount of inco-ordination, which soon made it necessary for her to have support in walking.

Among the first symptoms she observed were that while walking on the street she would stagger, or trip, without any assignable cause; or a sensation of great weakness in her legs would be suddenly developed, attended with considerable jerking or quivering of the muscles of her thigh above the knee.

Following these premonitory symptoms a general relaxation of all the muscles of her legs would take place, a sense of great prostration would take possession of her, surrounding objects would swim before her eyes, and if not supported she would fall. Again did she notice the diminished power in her legs by her inability to rise from a chair without the assistance of her hands, or in the act of sitting down she would suddenly and unexpectedly plump into the chair.

Similar inconveniences were experienced in going up and down stairs.

In addition to these symptoms of increasing paralysis was a sense of constant fatigue in the enfeebled members, attended with weakness in the back and occasional sharp darting pains radiating into the pelvis. The only other symptoms to be mentioned were chilly sensations, accompanied by general tremor of the body and palpitation of the heart, whenever she was exposed to the cold air or in any way excited.

About five years ago it became apparent to her that she was also losing power in her arms. Her attention was first directed to it by an increasing inability to raise her hands to her head, while arranging her hair, without some support for her elbows.

She is also of the opinion that her arms have grown much smaller.

During the past five years all her symptoms have progressively increased, and at the time of her admittance to the hospital the characteristic features of the disease under which she labors are well marked.

The position assumed by the patient in standing is characteristic. The feet are widely separated; the left foot inclines to talipes varus, while the toes present a strongly-marked claw-like incurvation. The right foot presents no departure from the normal position, except as regards its axis, which is directed inward. The body is bent to the right side, its weight resting principally upon the right leg, which occasions considerable outward bowing at the knee.

The shoulders are braced well back, and the scapulæ are unduly prominent. The abdomen is inordinately protuberant,—a result of the marked degree of lordosis which exists.

Upon being requested to walk, she invariably commences with the right foot, which, after some hesitation, is put forward, and as it advances describes an arc, and then comes suddenly, and with a jarring stiffness, to the ground. She then momentarily balances herself, and the left foot is advanced in a similar manner. During the walk the body is bent either to the right or the left side, according as the opposite leg is in motion. This gives to the gait the characteristic waddling. As she advances, the steps become shorter and executed with increasing uncertainty, until finally she loses her balance, grasps at some object for support, or falls. After being seated in a chair for some time, if requested to rise, considerable time elapses before she appears to be equal to the task. Then, after many futile attempts, she firmly grasps the arms of the chair, throws her head and shoulders well back,—then the lordosis is marked in an extreme degree,—straightens her legs with difficulty, and after a last but desperate struggle attains the erect position.

In the act of sitting down she seems to have abandoned all idea of executing the movements gracefully, but suddenly plumps into the chair. There exists also an inability to cross one leg over the other. All other movements of the legs are imperfectly performed, except flexion of the toes.

There is no impairment of the movements of the arms, except elevation above the head. Measurement of the extremities gives the following results:

Right arm, 9 in.
Left arm, 9¼ in.
Right forearm, 3 in.; below elbow, 9 in.
Left " " " " 8⅞ in.
Right thigh, 6 in.; above patella, 14¾ in.
Left " " " " 16¾ in.
Right leg, 12¾ in.
Left " 13¼ in.

The muscles of the arm are soft and flabby, and are certainly lacking in power, but the muscles of the forearm are firm.

Upon the anterior aspect of the thighs are large patches of roughened skin, not unlike that which is seen upon the abdomen of women after pregnancy, and below the knees are patches of goose-flesh.

There is no mottling, but there is to be observed a slight enlargement of the superficial veins near the ankle. The skin is of a yellowish, muddy complexion, but becomes of a dark blue upon exposure to cold.

The feet usually feel cold, but this disappears by evening. The surface-temperature of the legs, taken through a week, gives an average of $95\frac{2}{10}°$, the average temperature of the body being $98\frac{4}{10}°$. The calves present a considerable degree of hardness, and it is difficult to pinch up the underlying areolar tissue: this is more noticeable in the left than in the right leg.

The patellar reflexes are very slight, and there is no ankle clonus.

Sensation remains unaffected. The patient readily distinguishes between heat and cold.

The electro-sensibility is about normal. In the arms the farado-muscular contractility is considerably lessened in all the extensors of the fingers, and slightly lessened in the flexors. There remains, however, a good reaction in both forearms to a strong current. The reaction in both deltoids, especially the right, is generally lessened. All other muscles of the arms respond somewhat feebly.

The reaction in all the muscles of the back is diminished. The latissimus dorsi responds somewhat more energetically on the left side.

In both legs there is no response in either the anterior tibial or peroneal groups, but an application made to their surfaces brings out a reaction in the posterior tibial. The reaction of the gastrocnemii is slight. There is a slight reaction in all of these groups through the nerve.

In the thighs there is a very slight reaction in the quadriceps extensor groups, but no reaction through the anterior crural nerve. Practically, there is no response in the hamstring or biceps on either side.

There remains a slight reaction in the glutæi on the left side.

The electro-muscular contractility in both arms shows a general quantitative lessening in all the muscles except the extensors of the hand and fingers.

In the legs there is no response in the muscles, and a very slight reaction can be obtained through the peroneal nerve.

The muscles of the thighs show great quantitative lessening and diminished reaction through the nerve.

The glutæi show quantitative lessening.

The patient's appetite and digestion are good.

The bowels are regular.

The urine is of high specific gravity, due to an excess of urea, but contains no sugar or albumen. The menstrual function is normal. The action of the heart is irregular, occasionally intermittent, and a slight apex-souffle is heard after the first sound. The average pulse is 67°; the respiration 17. The pupils respond actively to light, and, with the exception of a highly-colored fundus, the ophthalmoscope reveals no morbid appearances.

January 30, 1883.

UNIVERSITY HOSPITAL.

CLINIC OF D. HAYES AGNEW, M.D., PROFESSOR OF SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by LOUIS J. LAUTENBACH, M.D.

VESICAL CALCULUS—REMOVAL BY LATERAL LITHOTOMY.

THIS child, 2 years old, brings before us certain symptoms which will always lead you to suspect vesical calculus. It suffers with pain on micturition. The child is continually pulling on the prepuce: hence its unusual elongation. We have here sufficient ground for the suspicion of stone. On introducing the sound and exploring the bladder, after a considerable effort the grating of the instrument against a hard body is heard as well as felt. There is no doubt of the presence of a stone.

The operation which I propose to perform here is the Cheselden operation,—the operation of lithotomy by the lateral method. Curious as it may seem, we are indebted to a quack for this operation. It was practised on the cadaver before some of the most distinguished men in France, and at length he succeeded in obtaining permission to perform it on the human subject. So numerous were those who wished to gain their way to the operative amphitheatre that it became necessary to call in the police to preserve order.

In performing lithotomy, the first thing to be attended to is to open the bowels thoroughly the day previous to the operation, by a gentle cathartic. An hour before the expected time of operation, an enema should be used to empty the lower bowel. You must not forget, before introducing the staff, to make another examination with the sound and assure yourself of the presence of the stone; after which a few ounces of tepid water are to be injected into the bladder. You may now introduce the grooved staff, which is to be fixed in the position you desire, and kept so during the operation. You next make your incision on the left side of the perineum,—as most people are right-handed,—and divide the structures consecutively until you feel the groove in the staff, which should be in the membranous part of the urethra. Then cut directly down upon it, and then forward into the bladder. You should always follow the knife by the finger, to see that you correctly enter the bladder. After the bladder has been opened, the stone forceps are to be slipped along the finger into the bladder, and then to be turned about, fishing for the stone. The stone when caught is to be removed by a rotary movement of the forceps. After the stone has been removed, again introduce your finger, to see if there be more than one. You must now wash out the bladder; this is done to remove any débris which may have separated from the stone in the act of its removal. Frequently the transverse perineal artery requires a thread.

The patient is to be put to bed, and placed on a restricted diet for two or three days, and a little opium is to be administered to keep the bowels quiet. This operation does generally very well for children.

I am inclined to think that frequently the starting-point of the stone is a little sediment in the bladder at the time of birth.

Examining the stone, we find that it consists of laminæ. It is an aggregation in layers of small granular particles of urates and phosphates. The difference in the composition of the various layers is due to the fact that they have been deposited at different times.

SIMPLE CYST AT SIDE OF NECK—REMOVAL.

The next case that is of a female with a large cyst on the right side of the neck. One year ago it was tapped, but it rapidly reaccumulated, and she now comes here for relief. Cysts are common in certain regions, and this is one of them. Sometimes from the beginning it is only a cyst with a straw-colored or watery fluid. Such cysts are formed from the connective tissue of the part. Extravasation of blood may become the nucleus for a cyst: it causes irritation and an inflammatory deposit in the connective tissue of the part, then an effusion of serum occurs, which supplies the connective tissue with the necessary stimulus.

Sometimes cysts are secondary to carcinoma or sarcoma, these tumors undergoing degeneration.

This is evidently a simple cyst. The treatment—and there is but one—is to make an incision and carefully detach the cyst-wall from the surrounding tissues, being careful not to injure the important structures in which the tumor lies. The external jugular lies upon the tumor, and therefore we must be careful to avoid it. If these cysts are tapped, it always complicates matters, as the tapping is always followed by more or less adhesion. Here the adhesions to the various surrounding structures are quite firm, and must be carefully cut away. We must be very careful not to break the cyst in its removal, as the fluid would escape, the sac collapse in all directions, and the operation be much more difficult.

TRANSLATIONS.

RESORCIN IN HYPERPYREXIA, IN INTERMITTENT FEVER, AND IN ANTHRAX AND ERYSIPELAS.—Resorcin, which has been called "poor man's quinine," is attaining a useful position in therapeutics. In Dr. Braun's clinic (*Wien. Med. Presse*, i.) it has been used in over three hundred cases of child-bed fever, in all cases where the pyrexia attained a certain grade, and almost invariably it produced a marked reduction of temperature, generally to the normal, rarely below, which usually was accompanied by more or less sweating. In some cases this was profuse. The temperature after its reduction seldom remained low longer than a few hours, so that the dose had to be repeated in the evening when a high morning temperature had required its use earlier. The usual dose was three grammes (forty-five grains), which some-

times had to be repeated. In cases where such large doses cause nervous symptoms, smaller ones are advised to be given and frequently repeated.

In intermittent fever resorcin has a position not far below quinine, although the dose is larger. Ugo Bassi (*Gaz. Med. Ital. Prov. Venet.*, 1883) reports its use in twenty cases, which were all cured except three. In one case the attacks were relieved by the remedy, but it did not prevent recurrences; this happens also with quinine. In all the remaining cases the cure was permanent, the patients being instructed to avoid fresh malarial poisoning. It required only two or three doses of two to three grammes each (thirty to forty-five grains) simply dissolved in water to effect the cure. Larger doses are not necessary. The great advantage of resorcin over quinine is its cheapness.

Dr. Skibnevsky (*Medizinskoje Obosrenije*, December, 1882) reports two cases of erysipelas in which subcutaneous injections of a five per cent. solution caused a rapid disappearance of the symptoms. From ten to twenty injections were made at one time into the affected area, and in each case they had to be repeated only once. It is worthy of notice that, in both cases, within about two hours after the injection not only did the fever disappear, but the temperature fell even below the normal.

Although resorcin in any form is not absorbed by the healthy unbroken skin, the contrary is the case when there is any morbid action going on in the skin, as in lepra, rupia, variola, scarlatina, or erysipelas, in which it both stains the skin and discolors the urine. In cases of parasitic disease of the skin its use has been attended by remarkable success. Dr. Justus Andeer has reported a case (*Aerztlich. Med. Blatt*, 1883) of carbuncle in which bacilli were detected, and a guinea-pig being inoculated with the pus died of septicæmia. Other remedies had been used locally without much result, when a fifty per cent. resorcin-vaseline salve was applied rather freely upon the pustular erysipelatous surface of the forearm, covered by a gauze bandage. A good diet was given. After this the pain and tension diminished, the surface rapidly assumed a more healthy appearance, and the eruption soon healed. The reporter declares that resorcin, whether in strong or weak solution, is entirely free from irritation, and never produces any eruption, and is, therefore, to be preferred to all aromatic disinfectants. It is best used in the form of salve. It is completely innocuous to the skin, and causes neither hæmoglobinuria like naphthol, nor toxic symptoms similar to those caused by carbolic acid, pyrogallic acid, etc. He does not approve of subcutaneous injections of the remedy.—*Deutsche Med. Zeit.*, No. 11.

THE MICROCOCCUS OF CEREBRO-SPINAL MENINGITIS.—In a case of sporadic cerebro-spinal meningitis reported by E. Leyden (*Centralblatt für Klin. Med.*, x.) an examination of the recent lymph lying under the pia mater of the spinal cord (obtained, without injuring this membrane, by a Pravaz syringe) showed a great number of micrococci, occurring both singly and in chains. These organisms were oval in form, and, although larger, in general appearance they resembled those found in pneumonia and erysipelas. Prepared with methyl-blue and fuchsin they had beautifully characteristic appearances. These organisms were also detected in the pia mater itself.

The presence of similar forms has been previously demonstrated in the exudative meningitis after pneumonia, as well as after injury to the skull. The reporter refers to this similarity, and considers it of interest that three diseases which in their anatomical forms and their course present so many points in common should also be associated with analogous microparasitic forms. Pathological anatomy had established the analogy between meningitis and erysipelas even before the parasitic element was talked of. This agreement appears sufficiently important to be mentioned here, and to recall the fact that erysipelas and pneumonia are not seldom associated with meningitis, whilst cerebro-spinal meningitis, even the epidemic form, is not rarely ushered in by a pneumonia.—*Deutsche Medicinal Zeitung*, March, 1883.

CHLOROFORM-INJECTIONS FOR TOOTHACHE.—Submucous injections of chloroform into the gum were first practised by Dr. Dop, of Toulouse, in 1872. For the last six years this method has been employed by Dr. Guillot to relieve odontalgia, and without a single failure. The needle of the Pravaz syringe is inserted into the gum above the tooth to the extent of two and a half centimetres along the bone near

the roots of the diseased tooth, a few drops are injected, and the needle is slowly withdrawn, keeping the index finger over the puncture to prevent escape of the injection. Almost instant relief is afforded to the toothache, and teeth are saved that otherwise would be extracted. No inflammation, phlyctenulæ, or ulceration had been noticed after such injections. When the gums are tender, or there is pain after extracting a tooth, a few drops of chloroform in some aromatic water make an excellent mouth-wash. It, however, should not be continued without being alternated with other forms of wash.—*Le Progrès Médical.*

Outbreak of Trichinosis in Spain.—A number of cases of sickness occurred during February last in Malaga, which were traced to some diseased pork: it was ascertained that the symptoms were due to trichinæ. Some forty persons were affected: five cases were fatal. The Spanish government has ordered the establishment of municipal laboratories in all the cities of the province, and directed that all pork shall be examined before being publicly exposed for sale. In case of oversight or failure to detect trichinæ when they exist, the examiner is held responsible if such diseased pork is permitted to be sold.—*Le Progrès Médical*, No. 6.

The Administration of Santonin.—In an extended communication to the Berlin Medical Society upon the effects of santonin, Lewin considers some of the symptoms of the absorption of the drug and the changes it undergoes in the circulation, and also the manner of its absorption from the alimentary tract. Santonin is insoluble in water and in weak acids, but is soluble in the gastric juice: as a result, the drug, instead of passing into the intestine to destroy the parasites by direct contact, is absorbed into the blood, where it is likely to cause constitutional disturbances. An oleaginous solution of santonin, however, passes through the stomach unchanged, and exerts its effect upon the intestinal worms. The author therefore condemns the ordinary mode of administration, and recommends oil as a vehicle. In adults it may be given in a capsule; to children it is simply given in a dessert-spoonful of castor-oil. In the treatment of oxyuris, a solution of santonin in oil rapidly destroys the worms when injected into the rectum.—*Deutsch. Med. Zeitung.*

Sarcoma of the Skin cured by Arsenic.—Köbner reports a case of generalized sarcoma of the skin cured by hypodermic injections of Fowler's solution. This favorable result had continued unaltered nine months after the cessation of the treatment. Altogether the amount of the solution of the potassium arsenite used was 20.75 c.c. (equivalent to 0.23 gm. of arsenious acid). The remedy used for the injections was at first diluted with two parts of water, afterwards with only one; from two and a quarter to nine drops of Fowler's solution were used daily. The fluid was usually injected into the muscles, and principally in the gluteal region. The sarcomatous growths began to dwindle away, showing at first a sinking in of the centre; and coincident with this, some enlarged lymphatic glands which had become prominent, and the swollen liver and spleen, progressively diminished until they resumed their normal size. The tumors, which at first were of a dark red, became pale, and some of them at the close of the observation had entirely disappeared.—*Berlin. Klin. Wochenschrift*, No. 3.

On Affections of Mucous Membranes in Lichen Ruber vel Planus.—In a series of cases of lichen planus, studied by Crocker (*Monatsheft für prak. Dermatologie*), were found white streaks and spots on the tongue, and also on the inside of the cheeks. They were scarcely above the level of the surface, and gave no pain or annoyance. No parasite was discovered. These spots and streaks are believed to be of diagnostic value, as they sometimes precede the skin-eruption by several weeks, and may remain after it has disappeared.—*Centralblatt für Chirurgie*, No. 5.

Treatment of Dysentery.—From experience with the dysentery of the soldiers returning from the expedition to Egypt, Dr. Rawle recommends highly the following method. Give a simple enema at a temperature of about 90°, and as soon as it has been discharged give one containing sulphate of quinia (gr. x), tincture of camphor (f℥iv), in barley-water (℥ij), which is to be retained.—*La France Médicale.*

Communicability of Leprosy.—Köbner failed to cause the development of lepra by inoculation, or even by transplantation of tissue, in a number of experiments upon lower animals.—*Virchow's Archiv*, 88.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 5, 1883.

EDITORIAL.

FOOT-BALL.

SOME years since, we took occasion to protest against the "Rugby Rules," which are now so universally followed in foot-ball, and which have converted a wholesome athletic sport into a barbarous and dangerous contest. The number of accidents which have resulted is very great.

At an inquest held in Liverpool on the 2d of last April, a coroner is said to have stated that "he had seen fractures of legs and arms, and dislocations without end, in the game of foot-ball; and the body before the jury was sufficient evidence that fatal results do occur." The unfortunate student had been "collared" whilst running with a ball, and the result of the fall was an injury to the spine, followed by death in a few hours. The umpires and spectators testified that the rules of the game had been in no jot or tittle departed from: indeed, the victim had said before his death that his opponent had acted fairly and squarely, and that he was to be pitied, not blamed.

This is the third inquest which has been held in the last few months upon foot-ball victims; one death from heart-disease, one from brain-injury. More serious, however, than these sudden apparent results, because more numerous, are the foundations laid for various organic diseases of the heart and nervous system by the violent strainings, the frightful falls, the sudden pitches upon the head, and the horrible violence of this gladiatorial pastime, which is in essence a rough-and-tumble fight and has probably wrecked a far greater number of lives than any one has an idea of. Although medical men in England, the continent of Europe, and to a less extent here, have spoken freely in regard to the matter, no attention has hitherto been given to their protests.

Young men and boys cannot perhaps be expected to have any wisdom in such a matter as this, but surely parents and caretakers might; and we think it to be the duty of medical attendants to warn such against the modern game. College authorities certainly have a responsibility in this matter. By a little effort they could restore the old rules of the game, under which the ball was not touched with the hands unless fairly caught, and never carried at all. In those days a "barked shin" or a bruised leg was the severest accident that could happen.

HOSPITAL MARINE SERVICE MANAGEMENT.

IN the Report of the Supervising Surgeon-General of the Marine Hospital, it is stated that the hospital at New Orleans had been offered for sale at thirty thousand dollars, but that, no sale having been made, the service had sustained the loss of the money paid for advertising.

The facts seem to be that this hospital, which had cost originally five hundred and ninety thousand dollars, and had had spent on it one hundred and fifty thousand dollars, was offered for sale, with the result of the highest bid being nineteen thousand dollars. All this the honest, straightforward Surgeon-General of Marines did not deem of any interest to the general public, although he could weep over the pennies lost in the besmirchment of printer's ink. No wonder his virtuous indignation had to find vent upon the bad management of the medical affairs of the navy. Seven hundred and twenty-one thousand dollars taken from the hard earnings of sailors, to be wasted in one hospital, through incompetency, or something worse!

Again, we are told—but not in the report—that at Cincinnati a marine hospital was obtained at the cost of two hundred and

thirty thousand dollars, and sold for seventy-five thousand dollars,—a hundred and fifty-five thousand dollars more gone! How many more of these hospital operations have disgraced the marine hospital service, we do not know, as we have no official facts to enlighten us; but those given in this editorial are vouched for as accurate by high authority. We should be most happy to publish an official denial of them. Of course no one has made money by these operations. No American politician ever did make money. Congress certainly ought, however, to insist on having a complete honest statement, so brief and clear that it could be read and understood by every one, of all the doings and the losses of this branch of the service; for at present its stupendous political cupidity and activity seem equalled only by the mystery of its mismanagement.

CONVICTION FOR UNLAWFUL PRACTICE.

WE print in another column the report of a case of atrocious malpractice which ought to have ended in severe punishment, but which simply shows the absurdity of jury-trials. We are, however, happy to state that a conviction has been secured in Wilkesbarre of one Wm. Taylor (Dr. so called), who was indicted under the recent law for "false statement of the right to practise medicine," and "unlawful practice of medicine and surgery." The evidence was clear that the man had made a false affidavit and had been practising unlawfully; and the jury, for once, did its duty,—much, it seems, to the surprise of most of the Wilkesbarre court attendants; at least so says the "Daily Union Leader." Of course motion was made for a new trial; but we trust the well-merited wrath of the law will not be turned aside from its victim. Murder is murder, whether done with drugs, gunpowder, or steel, and whether through reckless wilful ignorance or wilful ignorant recklessness.

DR. W. W. KEEN has been elected Professor of Surgery in the Women's Medical College of Philadelphia.

LEADING ARTICLES.

GASTROSCOPY AND ŒSOPHAGOSCOPY.

SOME OF THE RESULTS GAINED FROM THEIR EMPLOYMENT.

SINCE the time when dilatation of the main organ of digestion was first recognized as a separate disease of the stomach, and distinguished as a morbid lesion which may appear independently of carcinomatous or any other form of constriction of the pylorus, and since washing-out of the organ was instituted as a procedure specially indicated in this malady, the therapeutics of affections of the stomach has evinced a decided improvement. Diseases of the œsophagus, except ulceration and strictures, which fall generally to the province of the surgeon, are too much neglected by physicians, as a rule. Very little is known regarding œsophageal affections. But the introduction of the gastroscope and the œsophagoscope not only affords a better opportunity of studying the ailments of the stomach with more precision, but also those of the œsophagus will become more familiar and be better understood, recognized, and treated.

The gastroscope and the œsophagoscope* are both constructed on well-known principles and in a similar manner to other instruments of this class: the latter is modelled upon the cystoscope, and the former upon the urethroscope. Both have the hard, inflexible tube, the œsophagoscope being perfectly straight, while the gastroscope is bent between the ventral and middle thirds at an angle of 150°. A great and important improvement will be found in the gastroscope, in the walls of which, besides the conducting wires and the fine water-channels for the cooling of the glowing platinum wires, a minute air-channel exists, which is in connection with a rubber ball, by which the operator is enabled to drive air forcibly into the stomach if necessary.

* See Centralbl. f. d. Med. Wissensch., 1882, 21, L. Rosenthal; I. Mikulicz, Ueber Gastroscopie und Oesophagoscopie, Wiener Med. Presse, 1882, 45; Zur Technik der Gastroscopie, etc., *ibidem*, No. 52.

The introduction and use of these instruments are comparatively easy (we mean the instruments described by Rosenthal, *loc. cit.*). The person to be examined has to bend the head backwards to straighten the cervical curvature, as is done when the common œsophageal tube is introduced; the curve which is made by the lower dorsal and the upper lumbar vertebræ is taken into account by the bending of the gastroscope, as mentioned above. The lower part of the instrument, resting in the stomach, permits a rotation of about 180°, so that one is enabled in succession to see a continuous part of the stomach from the fundus to near the pylorus, without any change in the position of the instrument becoming necessary. By pushing the latter up and down, the area of surface to be viewed may be extended.

Concerning the *technic* of the operation, the following may be remarked. The stomach must be washed out as thoroughly as possible, and then filled with air, which if it is regurgitated can easily be reintroduced during the examination. The patient generally bears a long examination best while resting on one side in the recumbent position, with the face slightly bent downwards. In this manner the saliva collecting in the buccal and pharyngeal cavities is given more facility to run out, without any attempts at coughing or deglutition. Either of these may, besides, be prevented almost totally by administering to the patient, about ten minutes before the examination, a hypodermic injection of a syringeful of a four-per-cent. morphia solution, consciousness being fully preserved. This remedy, as well as the horizontal position, is indicated for either examination, for that by the œsophagoscope as well as for that by the gastroscope. An assistant is necessary to keep the head of the person to be examined in the proper position. The procedure, as may be inferred, causes the least disturbance when the stomach is empty.

The œsophagoscope is introduced with the aid of a guide, which is removed as soon as the former is in the right position. Any mucus from the stomach ascending, and so disturbing vision, is taken away with cotton wadding after removal of the illuminating wire. Any existing pathological obstacles have to be determined, before the introduction of the instrument, by the common elastic bougie. As regards the examination of the stomach, it may be mentioned that, according as the right or the left half of the organ is to be viewed, the patient has to lie either on the right or the left side of his body, the operator taking his seat at the head of the person to be examined.

The results thus far obtained from œsophagoscopy and gastroscopy are small. Mikulicz, who directed his investigations to the physiology of the stomach and œsophagus, found the mucous membrane of the latter in the normal state always to be of a pale-red color; here and there fine blood-vessels are noted. The surface is smooth and moist; deep longitudinal fossæ are nowhere observed. The entrance to the œsophagus is closed perfectly by the constrictor pharyngis inferior, the action of which is sphincter-like; the walls of that part of the œsophagus which is situated in the neck touch each other, undoubtedly in consequence of the pressure of neighboring parts, especially, however, of the trachea. Below the thoracic portion, from the height of the incisura jugularis manubrii to the cardia, the œsophagus forms a perfectly open tube, which, by the aid of the instrument, can often be viewed in its entire length. The walls evince three kinds of motion,—pulsatory (being due to the action of the aorta and that of the heart), respiratory, and peristaltic (light oscillations, or perfect waves of contraction), the latter mainly noted on attempts at deglutition. The transition of the cardia into the stomach is gradual, and the passage, in the normal state, always open, the closure of the stomach to the œsophagus being effected by a valve-like arrangement of the former while contracting, or by special muscular fibres, which run a peculiar course (Hyrtl). By the pulsating aorta the œsophagoscope is also set into a pulsatory motion. But, in contrast with certain pathological motions later to be mentioned, these pulsating ones are like mild pushes or slight lateral impulses.

The mucous membrane of the stomach has a more intensely red color than that of the œsophagus. When fully expanded, the former appears as a smooth membrane; more frequently, however, it presents more or less deep fossæ and folds, and even larger ridges. The vessels under the mucosa, with their characteristic branches, are plainly visible. The different motions of the stomach conform with those mentioned

above as being noticed in the œsophagus; the pulsatory are due to the aorta, and, through the diaphragm, to the heart. The same pulsatory motions, such as in the œsophagoscope are caused by the aorta, are transmitted also to the gastroscope.

Regarding morbid conditions of the œsophagus, the following have so far been examined with the aid of this instrument: two cases of carcinoma, causing stricture above the cardia; a foreign body in the upper thoracic portion; compression in the lower thoracic portion by an aneurism of the aorta descendens, which had not been recognized before the examination (here the motions noticed were strong, heavy pushes); two cases of cicatricial strictures; one case of injury of the mucous membrane due to a piece of a bone swallowed; and, lastly, a case of ulceration above the cardia and one such of the uppermost part of the œsophagus.

Later experiments have proved that the impediment caused by the trachea and the constrictor pharyngis inferior can better be overcome when, instead of a mandril, an elastic bougie is taken which corresponds to the size of the tube and has a conical point reaching from five to ten centimetres out of the œsophagoscope. The bougie opens the passage, and it is often possible in this manner to overcome easily the impediment mentioned without the necessity of having recourse to narcotization. When its object has been achieved, the bougie is withdrawn and the mandril put in its place. The same procedure, however, will not answer for the gastroscope, and here the hypodermic injection of morphia is considered to be the best means of surmounting the difficulty.

With reference to morbid conditions of the stomach, there is especially one which, since the employment of the gastroscope, has been greatly elucidated, and, one might say, rendered clearly understood only with the aid of this instrument,—viz., dilatation of the stomach due to chemical changes. Most of our knowledge of this disease we owe to the investigations of Dr. B. Naunyn.* He correctly states that, in a diagnostic as well as in a therapeutical direction, mechanical moments have been placed far too much in the foreground, and this has been done at the cost of chemical causes. Cases not rarely happen where the great curvature of the stomach descends far below the umbilicus, but, without its being correct to speak of dilatation of the organ, and *vice versa*, symptoms are frequently noted which generally are met with only in the latter disease, while no enlargement of the organ can be demonstrated. All these forms can, however, be explained, if we attach the main importance to stomach-fermentation, which can be easily recognized by the microscopical appearance of different microphytes that are obtained by the introduction of the gastroscope or a bougie, to the end of which sticks the mucus containing the sarcinæ or other fungi. The presence of the latter always proves that while the motor power of the stomach has become insufficient, this is not the primary cause of the evil, the latter being, *a priori*, induced by the altered chemical action. No remedy indicated for dilatation of the organ will here establish a cure, but washing out of the stomach with disinfectants (carbolic acid gr. i to gr. ii ter die) will soon remove all morbid symptoms. How great the anatomical changes may become in consequence of primary chemical alterations has, with reference to another organ, —the kidneys,—been proved by Aufrecht,† who succeeded by subcutaneous injections of cantharidin, which he made in animals, in producing all the different varieties of diffuse nephritis, and in each case the primary lesions were changes in the epithelium of the parenchyma induced by a peculiar affinity of the latter to the cantharidin, and ending in cirrhotic or atrophic kidney.

The last, though still an important result, which has been achieved by the aid of the gastroscope, is due to the fact that with this instrument the digestion of a small quantity of albuminous matter may be satisfactorily studied. Certainly the whole arrangement of the gastroscope, the necessary presence of a certain amount of atmospheric air in the stomach while the examination is going on, the comparatively limited area which at any one time may be inspected, and other reasons too apparent to need mention, exclude the possibility of studying the changes in any large quantity of albuminous aliment while its gastric digestion is going on. But if the quantity is small, the process mentioned may be

* B. Naunyn, Ueber das Verhalten der Magengährungen zur mechanischen Mageninsufficienz: Deutsches Archiv für Klin. Medizin, xxxi. p. 225.

† Allg. Med. Central Zeit., January, 1883, No. 2.

thus studied. In this connection, the investigations of A. Mayer* are very interesting. With the idea that in this manner the real assistance which pepsin (either alone or in conjunction with an acid artificially added to the normal gastric juice during the stage of digestion) bestows upon albumen undergoing its change into albuminose may be better studied than by methods hitherto employed, he instituted a series of observations which we shall mention directly. There is perhaps no physician who, at some time or other, has not prescribed pepsin with the laudable intention of fostering digestion, but there is also perhaps no physician who, even when employing the remedy in other cases under similar circumstances, has not been disappointed in the result gained. It has been found that if, for instance, a small quantity of the white of an egg with a given dose of pepsin has been introduced into the stomach of a human being, and if within about an hour the digested matter is inspected with the gastroscope, the result will vary greatly, according to the dose and the preparation of the pepsin, and according to the quantity of acid added or the absence of the latter, in one and the same person; *i.e.*, while at one time digestion will be finished, at another it will hardly have been commenced. Mayer's experiments tend to solve the problem, and they merit an extended mention, as they possess practical value concerning the administration of pepsin.

He prepared the pepsin himself from the mucous membrane of the stomach of the hog by the aid of glycerin, precipitating the extract with alcohol, washing the precipitate with alcohol and drying with sulphuric acid. As objects of digestion were used thin cylinders of coagulated white of egg, these having been obtained by pouring the liquid and raw albumen into small glass tubes and then placing the latter into hot water. It is apparent that were equal pieces cut of these threads it was certain that the effect produced depended, as far as the albumen was concerned, upon equal conditions. While it would lead us too far were we to give the experiments in detail, especially as the latter can be guessed, we will briefly communicate the results which Mayer gained. These were as follows:

* A. Mayer, Einige Bedingungen der Pepsinwirkung quantitativ studirt, Ztschrft. f. Biol., xvii. p. 351.

1. Pepsin dissolved in acidulated water and heated up to 55°–60° C. becomes inert. The albuminous threads digested in such a solution appear somewhat broken up, but no peptone can be demonstrated. In the stomach the digestion goes on more slowly, as if the addition had not been made. This fact shows that in making pepsin solutions too great a heat should never be employed, as otherwise their effect is destroyed.

2. The rapidity of digestion depends, *cæteris paribus*, upon the quantity of the pepsin: 0.02 grm. pepsin caused digestion within five hours and twenty minutes, 0.001 grm. in fifteen hours and five minutes. Quantities between them required six, seven, and twelve hours.

3. The most favorable temperature for digestion was near 55°,—therefore very near the temperature at which the pepsin becomes inert. The acidulation was made in this case with five per cent. of fuming muriatic acid.

4. The development of bacteria in the solution does not in the least decrease the effect of the pepsin.

5. The percentage of muriatic acid in the fluid is of far more importance, as regards rapidity of digestion, than the variations in the percentage of pepsin. While in case the percentage of pepsin was reduced one-half, the time necessary for digestion increased from five hours twenty minutes to six hours twenty minutes only, a solution containing 0.23 per cent. HCl was necessary to establish digestion within five hours and fifteen minutes; but if the solution contained 0.09 per cent. HCl, the time needed to perfect digestion was twelve hours and twenty-five minutes, and if it contained 0.05 per cent., hardly any effect could be noticed within fifteen and a half hours.

6. For the muriatic acid a series of inorganic and of organic acids was substituted, always in an equivalent quantity, and by trituration with sodium the salt conformed to a muriatic acid of maximum effect. The result of these investigations was as follows: time necessary for digestion —muriatic acid, three to five hours; nitric acid, five hours; oxalic acid, thirteen; sulphuric acid, nineteen. Each experiment was interrupted after a period of twenty-four hours. Lactic acid and tartaric acid evinced during this time a decided impression; formic, benzoic, and acetic acid had

less—but still a noticeable—effect. Butyric and salicylic acid had caused during this period no visible alteration. It may be mentioned that the pepsin employed was perfectly free from chlorides.

From these carefully-instituted researches we learn that pepsin, while it is not necessary to increase greatly its dose to enhance its effect, should always be administered with a decided dose of an acid,—and here we gain the most certain result with muriatic acid,—if it is our purpose to facilitate and to cause a more rapid digestion in the stomach, and that, while the temperature present during digestion in the latter organ is the one most favorable for the change of albuminoid bodies into peptones, we should insist upon any preparations of pepsin we employ being prepared without heat, as a temperature of 56° is known to destroy totally its digestive power.

In conclusion, we will mention another series of experiments which were instituted since the therapeutics of diseases of the stomach have been given a new impetus by the introduction of the gastroscope, and which, like those mentioned last, have also an eminently practical value, as they enlighten our views on an every-day occurrence,—viz., those of A. Düsterhoff.* Many physicians, when prescribing iron preparations, advise their patients, for some reason or other, to take such medicines either immediately before or after a meal. In this connection Düsterhoff's experiments are very instructive. He digested twenty cubic centimetres of artificial gastric juice and one gramme of fibrin with equivalent quantities of different iron preparations. After drying, the precipitated fibrin was weighed, and the quantity of the syntonin dissolved determined. The difference resulting indicated the quantity of peptone formed. The time of digestion in one experiment lasted three hours and ten minutes; in another, seven hours and a half. The addition of metallic iron in the first series of experiments amounted to 0.00614; and of pyrophosphate, muriate, and lactate of iron the same quantity was taken. In a second series other iron preparations were employed: the addition here regarding the quantity of metallic iron amounted to 0.0077 gramme. In a third series white of egg was used. Here the quantity of albumen which after digestion could be precipitated by boiling was determined.

All these experiments proved that the iron salts of organic acids disturb the pepsin digestion in a very high degree. It may be supposed, to judge from these investigations, that the muriatic acid of the gastric juice takes the place of the organic acids. We know, however, from the experiments of Mayer, that the latter acids cannot be compared, regarding their effect on digestion, with muriatic acid, so that a direct loss takes place whenever iron preparations are given at a time when the gastric juice is poured out for the purposes of digestion. But that this fact does not alone cause the disturbance induced by iron preparations in digestion is shown by the unfavorable influence which is exerted in the same direction by muriate and pyrophosphate of iron. Reduced iron, being dissolved in the gastric juice, absorbs also a part of the muriatic acid, but the amount dissolved of reduced iron as well as of pyrophosphate of iron is not great.

Düsterhoff's experiments teach us, therefore, never to prescribe any iron preparation together with pepsin, never to administer such remedies as the former at meal-times, but, in case we should be forced to do so on account of a special sensitiveness of the stomach, rejecting iron at any other time than while digestion is going on,—and we know of such cases,—it is best to prescribe either the reduced iron or the pyrophosphate of iron immediately after meals, and to administer at the same time a sufficient dose of pepsin and of muriatic acid to the patient at the beginning of the meal. We would thereby serve a double purpose,—facilitating and increasing the rapidity of digestion, and supplying the gastric juice with a surplus of muriatic acid, which may suffice for the solution of the iron salt. That the addition of some pure, bitter remedy, as gentian, etc.,—a practice so frequently made use of in the prescribing of iron preparations,—has a scientific basis we also learn from these investigations. The bitter drug stimulates the stomach to an increased secretion of its juice, and in this way the extra quantity of muriatic acid is poured out to unite with and dissolve some of the iron preparation without depriving the gastric juice of the quantum necessary for the digestion of albuminous principles con-

* A. Düsterhoff, Ueber den Einfluss von Eisenpräparaten auf die Magenverdauung, Dissert., Berlin, 1882, Centrlbl. f. d. Med. Wissensch., 1882, 145, p. 807, E. Salkowski.

tained in the food eaten. The injurious effect of iron salts on digestion has long been known, but it was usually ascribed to the astringent properties of the iron, as we were aware that tannic acid will precipitate pepsin and make it inert.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

AT the last meeting of the State Board of Health the report of the Secretary was read, giving some interesting facts for the past quarter. There were one hundred and fifty-two certificates issued to incoming practitioners, and three to midwives. Of six candidates presenting for examination in obstetrics, but one passed. There are now six hundred and fifty men practising medicine in the State who have not received any training or medical degree. This shows commendable work on the part of the Board, as there were, six years ago, about three thousand eight hundred non-graduates. The Secretary calls attention to the fact that some of the colleges do not come up to the requirements of the Board in the graduation of candidates,—indeed, not even to the requirements which they—the colleges—advertise. The working of five colleges is now under investigation, and it is not unlikely that some of them will be placed upon the black list. In one of the five "schools" three chairs are represented by one man, and he signs the diplomas as professor of anatomy, physiology, and hygiene. The United States Medical College of New York is considered as unworthy of recognition by the Board.

Some startling disclosures have been made as to the disposition of the county dead. The county undertaker has been charged with disposing of about eighty per cent. of the dead to medical colleges and at the same time collecting the usual amount of the county for their interment. The shocking part of all this is the treatment of the bodies before final disposition is made of them. They defeat recognition of remains by friends through the substitution of other bodies than those sought, and, when removing bodies for interment or other purposes, they have been thrown, to the number of two or three, in one box in a perfectly nude condition, whites and negroes together.

Efforts are being made to secure separate provision for our criminal insane. A committee of the legislature has reported favorably for the erection of an asylum in connection with the Chester prison, and it is altogether probable that the measure will be carried out. There are certain objections to the plan, not considered by the committee, the principal one of which is the insalubrious character of the proposed location. Chester is situated in the Great American Bottom, a portion of the southwestern end of the State notorious for its malarious character. The town is also very isolated, and an institution located there would be beyond that wholesome observation which is always a safeguard against abuses.

One of our physicians has been engaged in an examination of the atmosphere of the city, with a view to determining the influence of certain manufactures upon the health of localities. He claims that the presence of a number of breweries in a given locality prejudices the health of that part of the city by abstracting a large amount of ozone from the atmosphere; but the fact is that the localities thus designated compare very favorably, in the mortuary tables, with other districts of the city.

Dr. Brockholst McVickar, who has practised medicine in this city for thirty-five years, has retired. During the past year his health has become so much impaired as to necessitate continued rest.

CHICAGO, April 24, 1883.

CORRESPONDENCE.

LONDON LETTER.

QUALIFICATIONS FOR PRACTICE.

ONCE more the attempt is being renewed to enact a bill in Parliament which shall deal with the medical profession,—*i.e.*, satisfactorily. Ever since the writer can remember anything, there was a talk of a medical act which would redress the grievances of the profession. Now the Medical Act of 1883 is being attempted, with what prospects of success remains to be seen. It may help the reader to understand the position better to look at the matter historically. Before 1815 no qualification was required in order to practise medicine: it was a pure matter of contract. Yet by the medical account tendered to a great-grandmother of mine for attendance upon her husband, who died from a carbuncle, possibly aided by the treatment, the medical man in 1796 got pretty much the same amount that he could have done at least in 1870. Possibly the account of the present time does not enter into details, as "a large box of Basilicon [ointment], fourpence," or "Two doses of physic, daughter Mary, fourpence," while "To enlarging the incision on ye neck, nothing," which last would probably have some cash equivalent nowadays.

The usual thing was for a youth to serve an apprenticeship to some man of repute, and pick up what he could, and start practice in his turn. It is quite clear that such a scheme made small allowance for a knowledge of anatomy; but that was of little moment, as

fractures of limbs and dislocations fell to the share of the local bone-setter,—usually a craftsman skilled in the use of his fingers, with fellow-workmen around taught to pull steadily on a dislocation,—an individual scarcely yet extinct. Midwifery mainly fell to the midwife. The medical man was essentially an apothecary, made up medicines and prescribed them, interfering little with his neighbors the bone-setter and the midwife. If an ambitious youth, he served in the navy, and saw something of surgery, as well as other practice, after which he settled down as a superior practitioner, equal to cutting off a limb or operating for hernia when such skill was called for. This seemed to do all very well, but the advance of the times caused a step to be taken which upset the old standing arrangements. The medical man must carry a legal mark upon him by which he could be recognized. So in 1815 an act was passed that all persons not already actually engaged in practice must possess a qualification. "In practice before 1815" was common enough in the Medical Directory in the early years of its existence, but it has ceased now. The license of the Apothecaries' Hall was the great qualification after that time. The medical man understood how to compound drugs, and administered them. The qualified man now looked down upon his whilom confederates the midwife and the bone-setter, who only studied under some notable proficient, but who passed no examination. The College of Surgeons and the College of Physicians existed as corporations granting diplomas, but they had little to do with the profession at large; indeed, the latter college was a select one of members and fellows up to a very recent date, when a licentiate qualification was added. A man was a licentiate of the Apothecaries' Hall; that was the first qualified medical practitioner. After a while more ambitious men worked hard at anatomy and became members of the College of Surgeons; then this became quite usual. There were still many things which required looking to, and none more than some entrance-examinations. Men were allowed to study medicine on paying their fees, and passed an examination in Latin before they were allowed to pass any professional examination. Consequently, all idle fellows who had tired out the patience of their relatives when brought to book made a new start by studying medicine, reading up their Latin as best they could amidst their more technical studies. The medical student was the scapegrace of society. He lived away from his friends, and cared little for public opinion about him, and as a consequence got into scrapes, was fined, and nobody cared. The result of this was that whenever any man was had up before the magistrates he returned himself "medical student," and no further inquiries were made; the fine was inflicted, and he was dismissed, the magistrate probably thinking he had some decent friends somewhere who would be grieved at seeing him in the dock if they knew of it. When the act of 1858 rendered a preliminary examination absolutely essential for entrance upon a course of medical study, the whole of these questionable medical students were swept away, and with that the odium for reckless conduct which had attached to the medical student. Of course young men are young men, and when they are gathered together away from home-ties are apt to be "young men;" but the medical student of the present is a gentleman, and if treated as anything else sharply resents it. As to the variety of portals to medicine, a list of them was given a few months ago: there are English qualifications, Scotch qualifications, and Irish qualifications. There are considerable variations in the quality of these qualifications, which were then pointed out. But once through any portal the "qualified man" could do as he liked, and practise any or all departments of the medical art. All stood on the common ground of being qualified and legally equal. Of course this occasioned heart-burnings: the man who had studied honestly at great expense of time and money saw himself no better off than his neighbor who had struggled through an examination of some kind, and who perhaps took the lead of him by dint of a more thorough acquaintance with human nature. (This last is a factor in success which no scheme of education is likely to thrust aside.) The man who can impress a patient will ever keep ahead of the man who may have the knowledge but who cannot make the impression. There is no law of man by which honesty can be gauged in the relations of patient and medical man. The right-minded, honorable man says to himself something like this: "When a patient places confidence in a member of the profession, puts his life, his health, the prospects of himself, and maybe those also of his wife and children, in his hands, the least he can do in turn is to meet him with common honesty. If he be not entirely deserving of the confidence reposed in him, let him try to be worthy of it by doing his best. How much, however, does 'doing his best' involve? It involves all that lies in his power, each man to the very best of his ability, for unto whomsoever much is given, of him shall much be required. 'Doing his best' is taking all possible pains, which includes such information as may be attainable. Avoidable ignorance is not a worthy return for confidence." But the selfish man just looks to see how he can consult his own interests, with quite secondary feelings towards his patient. Of course no act of Parliament can admit the sheep and exclude the goats, but things are going to be a little more equalized; that is, provided the bill becomes law. The Medical Acts Amendment Bill is now before the House of Lords. It

NEW REMEDIES.

DIAPHORETICS.

PARKE, DAVIS & CO.,

Manufacturing Chemists,

DETROIT, MICH.

The remedies whose action is directly diaphoretic are so few that any additions to those which have heretofore been classified as possessing this property are of more comparative value than additions under the other heads covering the classification of drugs. This poverty of diaphoretics is the most convincing argument for a thorough trial of such of the following drugs as have not as yet become thoroughly known.

JABORANDI.

(Pilocarpus Pennatifolius.)

This Brazilian drug, though but a comparatively recent introduction to the materia medica, is already so well known as to render a consideration of its properties scarcely less necessary than would be a consideration of those of opium or any of the other standard drugs. It is, *par excellence*, the diaphoretic of the materia medica. We desire more especially in this place to ask attention to our preparations of it —the fluid and the solid extracts. We vouch for the conformity of these to the recognized standard of active principle. Our experience in the matter of new drugs has taught us the necessity of unusual care in the selection of the crude drug for pharmaceutical preparations. The liability to deception in these is, through the limited familiarity with their peculiarities on the part of both physicians and pharmacists, incomparably greater than in the case of old and standard drugs, and the newer introductions to the materia medica have not infrequently been made to suffer disrepute through this cause. In the case of Jaborandi, as in that of all the other newer remedies, the specification ("P., D. & Co.") on the physician's prescription will insure a preparation of full physiological activity.

SIERRA SALVIA.

(Artemisia Frigida.)

Although this drug is also classified as a diuretic, it is likewise, in conformity to a well-known physiological law, when the surface is kept warm, a diaphoretic. Illustrations of this dual action of drugs are furnished in the case of other diaphoretics, as, for instance, sweet spirit of nitre, etc., which act on the kidneys or the skin accordingly as the latter is kept warm or cool. Given in the form of a warm infusion, and with the patient's surface kept properly warm, Sierra Salvia is an active diaphoretic, and is especially indicated in the case of the eruptive fevers. Its diaphoretic action is notably more decided than that of any of the warm vegetable infusions popularly employed.

ELEPHANT'S FOOT.

(Elephantopus Tomentosus.)

Elephantopus Tomentosus is a drug of whose direct diaphoretic properties we are not yet fully assured by any considerable number of reports. We submit it on the authority of Dr. Newlon, of Kansas, who speaks warmly in its behalf. We solicit for it that thorough trial which is necessary to fix its place in the materia medica.

DETROIT, MICHIGAN. { PARKE, DAVIS & Co., MANUFACTURING CHEMISTS. } New York: 60 Maiden Lane and 21 Liberty St.

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The only Pepsine used in the Hospitals of Paris for the last 30 years.

Unlike the various substitutes which, in some cases, are but unscientific or incompatible compounds, forced upon the Medical Profession as aids to digestion by extensive advertising, but which, when submitted to the proper tests, are found to be almost useless as digestive agents, Pepsine is constantly gaining in the esteem of the careful practitioner.

Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

The most reliable tests, carefully applied, will satisfy every one that BOUDAULT'S PEPSINE HAS A MUCH HIGHER DIGESTIVE POWER than the best Pepsines now before the Profession, and is therefore especially worthy of their attention.

With a view of bringing this important remedy within the reach of all, *the price has been materially reduced.* It is now not only the best, but comparatively the cheapest.

In answer to frequent calls, another preparation is now offered,

BOUDAULT'S SACCHARATED PEPSINE,

having the same high digestive power as the amylaceous; it will be sent only when specified.

Boudault's Pepsine is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

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Besides Boudault's Pepsine in powder, we offer also

BOUDAULT'S WINE OF PEPSINE.

In this preparation the taste of Pepsine being perfectly disguised, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder.

DR. RABUTEAU'S

(Laureate of the Institute of France)

DRAGEES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragees, Elixir, and Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules*.

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Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragees; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

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A sample of Rabuteau's Dragees will be sent free to any physician mentioning THE MEDICAL TIMES.

Prepared by CLIN & CO., Pharmacists, Paris. E. FOUGERA & CO., Agents for the United States.

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FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

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This preparation, which has been used with great success in the hospitals of Paris since 1868, is adapted to the treatment of all diseases requiring the administration, in a small volume, of a tonic able to stimulate and support the vital forces, as *Pulmonary Phthisis, Depression and Nervous Debility, Adynamia, Malarious Cachexia, etc.*

Prepared by EMILE DURIEZ & CO., Successors to DUCRO & CIE., Paris.

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deals first with admission to medical practice,—that is, to the placing of the name on the Medical Register, instituted by the act of 1858,—and also deals with possessors of genuine foreign and colonial qualifications. Then it proceeds to "the establishment of medical boards" throughout the United Kingdom for the granting of qualifications after certain examinations are passed. As stated in a previous letter, the profession is ruled by the General Medical Council, the bulk of whom are representatives of the different corporations granting medical licenses to practise, who show a tender solicitude for the interests of these corporations. Then these corporations choose their own examiners. In fact, the corporations are the masters of the situation so far, and the medical candidate must submit to what they may choose to determine. Direct representation of the profession as a collective body has been actively urged, but remains yet unfilled, being still only in the bud. The attempt is going to be made at the next annual meeting of the British Medical Association to make its rulers direct representatives of the members, instead of being ex-presidents to such an extent as to neutralize all energetic action; and after that is achieved, perhaps direct representation in the General Medical Council may follow. Anyhow, this new bill proposes to have medical boards, one for each division of the kingdom, consisting of representatives of the different licensing bodies, all knocked into one; and these are to examine all students, so that something like homogeneity may rule. Each medical board shall be renewed every five years by the whole of the members retiring, apparently without their being eligible for re-election. This clause shows the wholesome fear which obtains as to the constituents of the boards putting their heads together and constituting themselves a clique, after the manner of oligarchies, if not sharply looked after. The medical boards are to regulate their examinations subject to the control of Medical Council and Privy Council. They are to hold examinations and grant qualifications to men and women alike. So we will be rid of the medical woman grievance, which will be a mercy! Male and female alike are to have the title "Licentiate of the Medical Council," which has for the future to be the legal name of a medical practitioner. Beyond this "medical qualifying title," any one may take further "medical higher titles," which includes "any title indicating or implying the grant of a diploma which may appear to the Medical Council to have been granted after examination in respect of a substantially higher degree of knowledge than is required to obtain a qualifying diploma under this act, or a diploma which has been granted as a testimonial of special distinction, and appears to the Medical Council to deserve recognition as a higher medical diploma." Those bodies who grant diplomas which the Medical Council does not choose to regard as a "medical higher title," if they feel themselves aggrieved by being thus sat upon, may appeal to the Privy Council, who can redress, if so disposed, the wrong done to the injured body. In this may be seen the prospect of some pretty little squabbles in the future, on which opinions may differ considerably. Then if any one is entitled to be a midwife, or a dentist, he or she may be such, but he or she is not to palm himself or herself off as a qualified "Licentiate of the Medical Council" upon an unsuspecting clientèle without being liable to fine, to be paid in purse or person. Of course considerable modifications may be expected from the threatened corporations, especially those whose qualifications will not, probably, be entered in the list of "medical higher titles" should this bill pass. The profession generally seem to think favorably of the proposed bill, and the Medical Reform Committee have a petition in preparation in support of it. It is strongly urged on behalf of the bill that, if it do not pass, any prospect of medical reform is thrown into the next century. If this really be a well-founded apprehension, then the conservative corporations will have to face the reformers aided by all the enthusiasts who desire to see the portals of medicine thrown open to women, a body whose enthusiasm and energy will not be without considerable influence on the result. Of course the objectors bring forward the oddest reasons for their conduct, even to the allegation that such a scheme will lower rather than elevate the profession. The Royal Commission some time ago appointed to inquire into the state of matters medical has strongly pronounced against the present inequalities of the license examinations, and the proposed bill is the outcome of its labors. Under the present scheme the visits of the General Medical Council to the examinations of the present licensing bodies will be a real investigation of their practices. Further, the General Council will consist of so many representatives of the license-granting corporations, but as collective representatives, not as representatives of individual interests with which they are identified. Under these altered circumstances the six Crown nominees will be able to exercise a much more pronounced influence than they could when each representative fought tooth and nail for the interest which sent him to the Council. The profession will have to arouse itself to see what its weight in the body politic of the State is. Perhaps it may be influential, perhaps it may not. Much will depend upon the private medical attendants of statesmen, and certainly very much upon what is done by the leading medical men who see much of peers and legislators. Wires of all kinds will be pulled, so far as they will pull. All kinds and sorts of arguments will be used. Perhaps the value of the

profession to the public will be realized vividly, or the tenets of the peculiar people who follow St. James, and pray while anointing with oil, will obtain further support. (The medical man who works up a practice by cultivating a certain congregation, and also uses prayer as a means to a concrete end, is much nearer the practice of St. James than may be pleasant for his patients to contemplate at times.) Anyhow, we will see what the profession can do for itself; also what the popular representatives at St. Stephen's are prepared to do for it. That the profession has often blundered in its own self-government must be admitted, and medical men are not all good business-men; consequently a little outside help may not be amiss. Indeed, if what appears in the medical press is any approach to what actually goes on—for their meetings are held in camera—in the College of Physicians, some scheme for a conjoint arrangement with the College of Surgeons was so inexplicable that a writer signing himself a "Puzzled Fellow" says, "It seemed to me at the meeting that most of those who took part in the discussion did not understand the full bearing of the question any more than yours, etc." This means, if it means anything, that those who took part in the matter did not fully comprehend what they were talking about, and that if there was any one present who did properly understand the subject he kept out of the discussion. Now, the medical press often girds at the old lady in *Pall Mall*, who seems not only venerable but infirm; but if this be the style of its discussions it is evident that no amount of social respectability will preserve a body, individual or corporate, from such intellectual laches as cause the world to scoff. In mercy, then, to our obvious inability to provide for ourselves, the collective wisdom of the British nation, as represented by hereditary and elected representatives, is going to help the medical profession; and if it is really true that if something be not done now nothing more will be attempted this century, it is to be trusted something will be done. Those who flatter themselves that they are moulding history had better bestir themselves, else the opportunity may slip past them, being "bald behind," and may never come again in their lifetime. Of course sundry busybodies are trying to make themselves of importance at this time. The most influential member of our profession, Sir William Jenner, is detained at Windsor in attendance upon the queen, who has had an accident which threatens to bring on some acquaintance with gout, to which the house of Hanover seems, like the Stuarts and the Tudors, to be liable. Still, there are many others who are in the position to exercise much influence upon those by whom our laws are made, and doubtless they will use that influence wisely and well. There is much to be done in Parliament this session in consequence of the time which has for the last two years been given to Irish affairs, but, as the informing and hanging stage is now well established, it is to be hoped Ireland will settle down into peace and prosperity and allow other affairs of the United Kingdom to be legislated for. So far from striking terror into John Bull by dynamite, a lady remarked calmly the other morning at breakfast, "I suppose these dynamite outrages will become fashionable this season," as if she were speaking of some new arrangement of wearing-apparel. If, then, the bill has to have a chance of passing, the profession will have to put its shoulder to the wheel and make a united effort. The time is ripe, has long been so, for something to be done to equalize the examinations all over the land. The favorite argument of the licensing bodies who have been charged with being below the mark in their examining-tests has been this: "There are many areas which it will never repay a highly-educated medical man to settle in, and which must therefore either go without a medical man or accept an indifferently-educated man;" in other words, the "half a loaf is better than no bread" argument. As, however, once through a portal the medical man can go anywhere, the argument has a good deal to be said against it. And certainly the class of men entering the profession is socially higher now than it used to be. Many men who belong to good families and possess certain private means now enter the ranks of medicine with the intention of becoming specialists in easy departments, as eye or ear, who, from want of bodily vigor, in many instances, would never have thought of being medical men in general practice, and who would a generation ago have in all probability found a sufficient occupation for their energies and some addition to their incomes by entering the Church. Of course such men form a strong contrast to the energetic men of small means who struggle into the ranks of medicine and who strive after a large practice. The meditated bill, if it becomes a law, will blight the hopes of many an aspirant for a medical qualification, as well as those of the corporations who find it remunerative to carry on their examinations with regard to the needs and requirements of comparatively poor neighborhoods.

J. MILNER FOTHERGILL.

THE THIRTY-FOURTH ANNUAL SESSION OF THE PENNSYLVANIA STATE MEDICAL SOCIETY will be held at Norristown May 9, 10, and 11, 1883. A very full programme has been issued, and a large attendance upon the meeting is anticipated. The Montgomery County Medical Society will give a banquet to the Medical Society of the State of Pennsylvania on the evening of May 10.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL conversational meeting of the Society was held at the hall of the Society, March 21, 1883. Dr. De Forrest Willard read a note of a case of "Fæcal Impaction of Four Months' Standing" (see page 533).

DISCUSSION ON IMPACTION OF FÆCES.

Dr. Eskridge said that the case was very remarkable, and, if it were not for the fact that similar ones are on record, we might hesitate to believe it. Flint refers to a case of a patient whose bowels were opened at intervals of rather more than eight months. Other instances of shorter periods, such as one month, are on record. A case, which has attained some notoriety, exists in this city, in which a period of five months, or sometimes even longer, is said to elapse between the movements of the bowels. Dr. Eskridge has recently examined this patient, a woman, who claims to have vomiting of fæcal matter once in about four to eight weeks, and discharges from the bowels at intervals of four to six months. He believes her to be an impostor.

Dr. Blackwood referred to two cases of constipation which he had. The one, a young woman, had the bowels moved only once in ten days; the second case is the mother of the young woman, and at first had passages only once in three weeks. Conditions of this kind can be corrected by education,—that is, by training the bowels to regular action at certain times. In both these cases material benefit had resulted from such practices: the mother is now entirely normal, and the daughter has been brought to an interval of two days only between the movements of the bowel. The prior condition, however, in which the long intervals existed did not seem to influence unfavorably the health of either patient.

Dr. O'Hara thought the band across the intestine was not the cause of the constipation, as there was room enough for fæces to pass. The condition was due to the torpor of the intestine, which could be aroused to action by functional stimulants. He had, some time ago, seen a child, eleven years old, in whom no regular movement of the bowel occurred for some months, so that finally the abdomen became swollen like that of a pregnant woman, although a diarrhœa-like discharge occurred every day. The diagnosis was exceedingly obscure, there being a general enlargement with diarrhœa. He finally succeeded in inserting a long tube into the intestine, and got away quarts of fæcal matter, which also revealed the diagnosis. The condition recurred after a time, but was easily cured. He wondered, in the case reported, that there were no discharges whatever for such a lengthened period, and would venture the paradoxical remark that one symptom of obstipation of the bowels is diarrhœa.

Dr. Wilson said he desired to call attention to a clinical fact that where obstinate constipation exists it is not uncommon to find a dilatation of the rectum and a patulous anus; associated with these conditions will be a sort of diarrhœa from intestinal catarrh. He has seen in post-mortems two cases of intestinal bands. These were the result of previous inflammation in or near the intestine, and had caused obstinate constipation. It is not necessary that the constriction should be great, in order to interrupt the peristaltic wave. We must bear in mind that after perityphlitis secondary dangers may arise from the development of intestinal obstruction.

Dr. Willard said, in answer to a question by Dr. Baldwin, that he saw the case only towards its termination, but that he had stated in the history that cathartics had been regularly used by the patient for many years. In the paper he had neglected to speak, as he had originally intended, of the diarrhœa of constipation, which usually exists in cases like the present, but was absent, so far as he knows, in this instance. The fæcal matter seems to act as a foreign body provoking intestinal catarrh, and the secretion finds little difficulty in trickling down between the walls and the solid contents. In the dissecting-room he had seen instances of inflammatory bands constricting the intestine without dilatation. One remarkable instance he had presented to the Pathological Society some twelve or fifteen years since. In the case under consideration, the constriction was probably congenital, as the constipation had existed from birth.

SPECIMENS OF ANEURISM OF ARCH OF AORTA AND OF RENAL ABSCESS, WITH NOTES OF THE CASES.

Dr. Vogler read the following notes of cases, and exhibited the specimens relating thereto.

I desire very briefly to call the attention of the Society to two interesting pathological specimens,—an aneurism of the arch of the aorta, and a tuberculous renal abscess. The patients from whom these specimens were obtained were under my care at the German Hospital.

Mary L., widow, aged 35, was admitted into the house February 24, suffering with the following symptoms:

A pulsating swelling in the front of the chest, immediately over the arch of the aorta; a distinct murmur on auscultation; a perceptible thrill in the enlargement; and all the signs of pressure, such as cough, pain, dyspnœa, difficulty in swallowing, etc. Death occurred rather suddenly on February 28.

Post-mortem examination.—Emaciation not very marked; extensive effusion in right pleural cavity; recent pleuritic adhesions, covering an area of three square inches, upon same side; lungs emphysematous, save some

chronic indurations or thickening at the base of the left lung; no signs of tubercular disease; the heart was displaced downwards and to the left; the aneurism of the arch was divided into three pouches or cavities, as shown in the specimen before us, each containing a firmly-organized clot. The size of the aneurism was about equal to the size of the heart itself. At the upper part of the sac, where the force of the blood was spent after each pulsation of the heart, a marked thinness and abnormal condition are noticeable, which, no doubt, would sooner or later have been ruptured, resulting in immediate death from hemorrhage. No valvular disease; though extensive aortic valvular disease was supposed to have existed during life, by the loud murmur produced by the blood rushing over the uneven surface of the clot so near the aortic valves.

Tuberculous Renal Abscess.—This specimen was removed from a male subject, a clerk by occupation, aged 32 years. He was admitted into the hospital December 17, 1882. Previous to his admission he had been under the care of a professional friend, who treated him for Bright's disease.

Some three years ago, he had a severe attack of pneumonia, from the effects of which he never fully recovered, and slowly the usual train of symptoms of tuberculization of the lungs set in. Secondarily, I believe, the kidney-affection came on, and the destructive change shown by the lesion was comparatively rapid, and the cause of death by exhaustion.

Briefly, the chief symptoms were great emaciation, frequent micturition, passing between forty and fifty-five fluidounces daily, pain in the lumbar region, and hectic fever. No uræmic convulsions.

The temperature-sheet shows the characteristic fall and rise, the latter frequently sudden and startling.

Microscopic examinations of the turbid urine indicated the severe nature of the disease, by the granular débris, shreds of connective tissue, disintegrated mucous membrane, etc. The urine was always albuminous, but variable in amount.

Post-mortem examination revealed extensive tuberculization of the lungs, and in the apex of the right lung (specimen shown) several cavities are noticeable.

The left kidney (specimen shown) shows the destructive change previously alluded to: the cavity of the abscess contained from one and a half to two fluidrachms of pus. In close proximity to the above lesion may be detected tubercular points. The right kidney was normal. Other organs healthy.

SPECIMENS OF MEMBRANIFORM EXUDATION OBTAINED FROM A CASE OF PURULENT PLEURAL EFFUSION.

Dr. J. C. Wilson exhibited specimens of membraniform pleural exudation removed during treatment from the chest of a child, three and a half years old, suffering from purulent pleural effusion. The case had resulted successfully after treatment extending over the course of about five weeks. The strips of exudation shown were, although contracted by the preservative fluid, of considerable size, being $1'' \times 2''$ in diameter and about $\frac{3}{16}''$ in thickness. They were of a whitish color, and presented the usual microscopic characters of such inflammatory exudations. They were merely samples of very considerable quantities of tough membranous masses that had from time to time been removed through the opening in the chest-wall during the course of the treatment, and, though possessed of no special interest in themselves, were shown as illustrations of an occasional complication of the treatment of such cases.

In the case in question, the presence of this false membrane had not only interfered with the escape of the fluid at the time of the operation, but had also subsequently very frequently blocked the soft catheter used, and on several occasions necessitated its removal and the use of forceps to clear the fistula. On these occasions masses of considerable size had been often extracted.

Dr. Willard said large aspiration trocars should be used. He had once been very much chagrined, on having inserted a needle, at getting no flow, although he was sure pus was present. He then cleared the canula, and got a free flow for a moment, but this stopped. He terminated the operation by laying open the cavity. He had seen the same obstructive effect from shreds of tissue in cold abscess of the joints. In post-mortems he had seen the pleural cavity nearly filled and divided by lymph bands, sometimes very beautifully looped, like lace, and these could safely be drawn into the tube. Every means should be at hand for clearing the canula.

Dr. Wilson, in closing the discussion, said, in answer to a question, that the case reported did show slight œdema of the lower chest-walls on the affected side, but that after the operation and during treatment the œdema disappeared. During the latter part of the treatment, however, the pus ceased flowing for a time, and then, although the heart had returned to its place, the pulse and temperature increased and marked œdema developed. He introduced a probe and caused the pus once more to escape. The œdema again promptly disappeared; the sinus afterwards healed permanently, and the child got well.

SPECIMENS FROM A CASE OF PHTHISIS, WITH GREAT LOCAL THICKENING OF THE PLEURA, AND CONGENITAL DEFICIENCY OF THE PERICARDIUM.

Dr. Edward T. Bruen read the following notes:

The specimens which I propose to exhibit include the lungs, the liver, and the heart

from a case of phthisis, with great local thickening of the pleura.

The portion of lung principally affected by the phthisical process is the upper left lobe. The anterior inner margin is permeated by bands of cicatricial tissue, and to the depth of six inches the tissue is fibrous, tough, and dense. Alterations of a similar character occupy an area about five inches vertically by four laterally. Over this mass, and between the first and fourth ribs at the right border of the sternum, there was a swelling caused by the bulging of the ribs produced by subcostal pressure. Beneath this mass the lung-substance has been extensively destroyed by the desquamative pneumonic process. In the upper lobe there are several cavities. The other two lobes upon the right side contain some diffused nodular masses of a phthisical character, but in the main the pulmonary tissue is physiological.

Now, the special feature of interest from a pathological stand-point is that the phthisical process probably developed itself from the pleural disease. The clinical history substantiates this view, since the first symptoms of chest-trouble dated about eight years prior to the death of the patient. These symptoms were pain in and around the chest, with shortness of breath, accompanied by asthmatic attacks. The advance of the disease for over seven years was slowly progressive, the cavities having formed only during the last six months of the patient's life. There was also a family record entirely free from tubercular or scrofulous taint. The second interesting feature is that the local pleural thickening suggested during life either an aneurism, a tumor arising in the mediastinum, or an encysted purulent collection which was undergoing absorption. Briefly speaking, the usual signs of aneurism, such as murmur, pulsation, thrill, or pressure-symptoms, were absent, and there was no specific history or other cause of arterial disease. The patient's age, which was 32, the absence of cachexia, the duration of the illness,—nearly eight years,—opposed the idea of malignant growth; and the absence of syphilitic history disposed of the hypothesis of gumma. The diagnosis resolved itself into the proposition that the tumor resulted from pleural thickening, or the same possibly enclosing a purulent collection in a state of partial resolution. These suggestions are favored by the fact of associated phthisis, and because the patient suffered from irregular chills with febrile movement. An exploratory puncture was made into the tumor, which demonstrated its solid character, and the diagnosis was positively established upon the first supposition. The further interest of the specimen centres in the deficiency of muscular tissue in the diaphragm and the congenital absence of the pericardium. The liver was folded upon itself and drawn up into the chest-cavity as high as the second rib at its outer portion. This could not have occurred if the diaphragm had been normal in structure. The absence of the pericardium permitted the heart to yield to the traction of the pleural adhesions, and the apex was tilted upward and to the left. Before death the apex-pulsation was felt in the fourth interspace, four and a half inches from the left border of the sternum. During life the altered position of the heart was ascribed to traction by the pleural adhesions, but the absence of pericardial tissue was not surmised.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held April 19, 1883, FORDYCE BARKER, M.D., LL.D., President, in the chair.

The scientific work of the evening consisted in the reading of two papers, the first by Dr. GASPAR GRISWOLD, entitled "*Note on Crystalline Elaterin.*"

The author first spoke of elaterium as being one of the best of hydragogue cathartics, but it had largely fallen into disfavor because of the great variation in strength of different specimens; it therefore became very desirable to obtain a preparation which could be relied upon in all cases, especially those of a critical nature, and he believed that such a preparation was that of Merck's crystalline elaterin, which was identical with that obtained by Morries in 1831. The difference in the method of manufacture, and the appearance of elaterium in its ordinary and impure forms, and crystalline elaterin, was described, and some cases in which the latter had been tried, in all with excellent results, were cited. The conclusions reached were: first, that the crystalline elaterin of Merck, now for sale in this city, is identical with that described by Morries in 1831, and is the active principle of elaterium; second, that its definite crystalline form, its freedom from impurity, render it more reliable than any preparation of elaterium; third, that the proper dose to commence with is one-tenth of a grain, and that this may be prescribed in a solution of one grain of elaterin to half an ounce of alcohol, or in the form of tablet triturates containing one-tenth of a grain.

The second paper was entitled "*Anteflexion of the Uterus: its Etiology and Associated Pathological Conditions,*" and was read by the author, Dr. W. GILL WYLIE, who opened his remarks with a description of the uterus and its anatomical relations in a state of health. He gave the average depth of the organ as a little more than two and a half inches. It was flexible, and when pressure was made upon its upper portion it bent, principally at the internal os, forming not an acute angle, but a curve such as would be formed by a rubber tube with thick walls and small calibre. The uterus was held in position principally by con-

nective tissue, fascia, and peritoneal reflections, which formed more or less distinct ligaments containing a certain amount of muscular tissue, and which were sufficiently elastic to allow of mobility of the organ, especially in an upward-and-downward and backward-and-forward direction. The elastic contractility of the muscular structure of the arteries, of the ligaments, of the connective tissue of the skin, of the so-called cellular tissue of the pelvis, etc., exerted a pressure which he designated by the term *vital musculo-connective-tissue pressure.*

The dynamics of the pelvic cavity were considered, especially with reference to the influence of force in causing anteflexion. Atmospheric pressure has little to do with keeping the pelvic organs in place by opposing gravity. The influences which prevented the uterus from bending forward at or above its middle when the person was in the erect position, or when the organ was pressed upon by the force transmitted by the action of the diaphragm, abdominal muscles, etc., were—first, the firm and elastic nature of the organ, which tended to keep it in normal shape; second, its forward inclination and slight anterior curvature, which placed it in the best possible position to enable it to withstand both continued and sudden waves of force from the action of the diaphragm and the abdominal muscles; third, the influence of the vital musculo-connective-tissue pressure, or the sustaining power of the surrounding flexible and elastic adjustable tissues, which were filled with blood, fluids, etc. The uterus while surrounded by these elastic and adjustable tissues during life was sustained in the manner of a flexible sea-weed surrounded by water. Those who advocated the mechanical pathology of uterine displacements had overlooked this influence largely, and had, therefore, exaggerated the effects of sudden falls in producing anteflexion and the value of mechanical support in effecting a cure. The downward pressure on the uterus by the forces already referred to tended in its normal state to produce prolapsus rather than anteflexion. But when the organ was soft, the causes which tended towards flexion during the downward pressure of the diaphragm and the abdominal muscles were—first, the normal position of the organ, which was one of anterior curvature, and, when the tissues were soft, the weight of the fundus tended to increase such curvature; second, downward pressure would cause the pouch of Douglas and the bladder to yield first, which made taut the utero-sacral ligaments attached to the uterus posteriorly at a point just above the vaginal junction. Until they yielded, this part of the uterus would be retained upward and backward, while the abnormally soft cervix would be pushed in the direction of the vaginal axis, and the utero-vesical ligament would be made taut only at its higher points of attachment to the uterus, and the fundus would be pulled downward on the bladder. The third cause involved a consideration of Hart's division of the floor of the pelvis into two segments. The fourth cause of flexure of the uterus when soft was loss, to a greater or less extent, of the vital musculo-connective-tissue pressure. The bladder, except when considerably distended, had little or no influence in changing the position of the uterus; when greatly distended, it carried the organ downward and tended somewhat to straighten out the anterior curvature. The rectum, unless habitually distended, did not affect the position of the uterus to any important extent. There might, of course, be other mechanical influences brought to bear. The point of greatest curvature in anteflexion was often difficult of determination; as a rule, it was just about the os internum: first, because the uterus at this point was smaller than at any other point; second, it was at this point that the cervix and the body, which were somewhat different in structure, united; third, it was here that large blood-vessels were found, which tended somewhat to weaken the walls; fourth, just at and above the os internum the uterus was free, while the cervix just below was fixed by a firm supporting ring, formed by the attachment of ligaments. When the vaginal portion of the cervix was abnormally soft or long, flexion might take place in that portion.

The time for making an examination to determine the exact degree of curvature which existed should be selected, and a period about midway between the commencement and the cessation of a menstrual period was usually preferable, as at this time the uterus was more likely to be in a quiet state, indicating the true amount of flexion.

After speaking of the variability of the generative organs, the degree of anteflexion and its frequency were referred to. It was to be found in all multiparous women in some degree, but the angle of flexion might vary between 165° and 135° and not indicate an abnormal condition.

Under the etiology, congenital influences which prevented perfect development of the organs of generation undoubtedly greatly predisposed to anteflexion of the uterus, and had much to do with premature atrophy and degeneration, which were so frequently associated with it. The evil influence of modern modes of life, the development of the intellectual at the expense of the physical system, the condition of the general health, anæmia, and other unhealthy states of the body, had their influence in the production of anteflexion of the uterus. Child-bearing was commonly enumerated as a cause, but the author preferred to modify the expression, and say, too frequent child-bearing, or abnormal labor, or the puerperal state, or labor in an unhealthy woman, might be causes of anteflexion. Other causes were mentioned.

With regard to pathology, the writer said that for several years past he had given up the belief that anteflexion frequently directly caused dysmenorrhœa by mechanically closing the canal and thus obstructing the menstrual flow. Where there was obstructive dysmenorrhœa, except in rare instances, he believed it to be due, as a rule, to stenosis of the os uteri at some point, or clonic spasm at the os internum; that it was due to the hyperæsthetic condition at or near the os internum, combined with more or less stenosis. He divided anteflexions into two classes,—those which were congenital, and those which were acquired, including among the former those cases in which the deformity occurred before maturity had been reached, and in which the cause was imperfect development. The peculiarities of these two classes of cases were then considered.

DISCUSSION.

Dr. T. A. EMMET was requested by the President to open the discussion, and said that the subject was so broad a one that it was impossible in so short a space of time to discuss all the points involved. He thought, however, that the question could be simplified very much by recognizing, in accordance with his own experience, that in anteversions of the uterus, as in most other versions, the trouble was due entirely to an inflammatory action, or obstruction in the circulation outside of the uterus, usually to a cold. When dysmenorrhœa accompanied that condition, it was not a mechanical effect, but was due to faulty nutrition, obstruction of the circulation, and effects upon the nervous system and general health. He thought it was important to recognize this cause of flexure, for the simple reason that we have no greater amount of malpractice than in the treatment of this condition by dilating the cervix, making applications within the uterine canal, etc., treating the effect as if it were the cause. He did not know that he had ever seen a case of anteflexion of the uterus give the patient any trouble but what there existed inflammation within the pelvis somewhere; and that explained why we almost invariably had trouble in surgical procedures for its relief. This fact should be borne in mind also in attempting to correct what we considered malposition. There was often malpractice in attempting to replace the organ, as it was imagined should be done, when it was not known what should be its proper place; there was danger of setting up inflammation anew. This was equally true in the treatment of other uterine versions, and he believed that this fact explained why there was such a wide difference of opinion with regard to the use of pessaries. Whenever anteversion existed,—and he limited his remarks to this form of displacement, as it alone had been discussed in the paper,—we had first to reduce inflammation to a point where it was safe to take steps to restore the uterus to its normal position. Whatever mechanical appliance was used, it simply gave the patient relief by raising the uterus to a certain point in the pelvis where the circulation could be restored. There were cases even where the anteversion might be made greater by raising the organ higher within the pelvic cavity, and yet relief be afforded thereby, simply because strain was taken off the ligament which had been shortened, and the circulation restored.

Dr. W. T. LUSK said that he had been invited to take part in the discussion, but that nearly all the remarks which he had expected to make had been anticipated by the author of the paper, and he would not further consume the time of the Academy.

Dr. W. M. CHAMBERLAIN had been extremely interested in the paper, and he believed that it involved a range of inquiry which we would all do well to prosecute. He would refer to a single illustration of the propagation of the force of the diaphragm, the abdominal muscles, etc., referred to by Dr. Wylie. Whoever had had occasion to observe the movement of the abdominal contents in a patient etherized and seized with a fit of vomiting would recognize the fact that the maximum of downward pressure by wave-motion was not exerted in Douglas's cul-de-sac, but rather in the interspace anterior to the uterus and upon the wall of the bladder. The extrusion of the vaginal wall, as he had seen it in such cases, had always been much more in the form of a cystocele than in the form of a proctocele; that is, the anterior wall descended much more than the posterior. He believed that the question of uterine dynamics should be considered with reference to education and habit as well as to the cure of displacements. Manifestly, any great departure from the order of nature which fashion dictated was mischievous. He would name, for example, the effects of posture, such as was assumed more two or three years ago than at the present time, called the Boston dip, which consisted in relaxing the walls of the abdomen and bending the body forward. If one would imitate the posture, and observe the effect upon the viscera, he would see that it nullified the anatomical support of the organs, as Dr. Wylie had stated. The influence of high-heeled boots in diminishing and altering tension upon the anterior wall of the abdomen he believed to be a matter worthy of consideration. He was particularly pleased with the author's statement with regard to the term vital musculo-connective-tissue pressure. While Dr. Emmet had spoken of anteflexions, in which the trouble was dependent upon a greater or less amount of inflammatory process, he thought there were also cases in which anteflexion, and more especially cases in which anteversion, was a source of great discomfort to the patient, and which would never

be cured by mechanical appliances, because they were dependent essentially upon an empty state of the connective tissue, and that in many of these women who were bedridden the version or flexion of the uterus continued simply because they were bedridden, and the only means of cure would be found in the use of measures for the restoration of the general tone of the entire system, particularly measures for bringing about healthy nutrition.

Dr. WYLIE, in closing the discussion, said, with regard to the point made by Dr. Chamberlain, that in a patient under the influence of ether the anterior wall of the vagina was that which descended. It should be remembered that in Sims's position the curve of the spine was mainly taken out, and the greater part of the force was directed downward more in the direct line of the vagina. He believed that when the healthy woman stood erect the pressure was exerted equally and the uterus tended to sink evenly.

REVIEWS AND BOOK NOTICES.

THE HOSPITAL TREATMENT OF DISEASES OF THE HEART AND LUNGS, with over Three Hundred and Fifty Formulæ and Prescriptions, as exemplified in the Hospitals of New York City, etc. By CHAS. H. GOODWIN, M.D. New York, C. H. Goodwin, M.D., 1883.

This book, with its numerous "formulæ and prescriptions," professes to exhibit to the admiring world without the practice of Bellevue, New York Charity, Roosevelt, Presbyterian, St. Francis, St. Luke's, German, and Mt. Sinai Hospitals. The reader having mastered the contents of this book can on his first visit elect to treat his patient after the manner of any one of the above hospitals: he should beware, however, of trying any two methods at once, or of intermingling his methods. The real value of a book of this kind, supposing it—as we presume this is—to be faithfully written and really to represent what it professes to, is doubtful. It tends far more than the ordinary text-book to prevent individual thought and action,—to make the practitioner relying upon it merely a feeble reflection of this eminent man to-day and that eminent man to-morrow, and leave him without individuality. We admit, however, that Dr. Goodwin's work seems to have been done with care, and all possible means taken to render it of value to those who are debarred by distance and want of time from imbibing medical knowledge directly from the great fountains which flow so freely in the American metropolis. E. W. W.

TRANSFUSION. By CHAS. E. JENNINGS. London, Ballière, Tindale & Cox.

This wee brochure gives some early history of transfusion, but is chiefly devoted to describing a very simple apparatus, and to calling attention to the fact that warm saline solutions are nearly as useful as blood, and much more easily obtained. The author remarks, and his arguments strongly indicate, that a mixture of blood and saline solution is the best —*i.e.*, safest and most efficient—fluid that can be employed. From the contents of this and various other English books, it would seem that hemorrhage in connection with pregnancy and labor is far more frequent and serious abroad than in this country,—a fact which is in accord with the statement made by Dr. Brown-Séquard before the International Medical Congress in London, that both men and animals bleed much more easily and freely in Europe than in America. He affirmed that wounds on the battle-field were far more frequently followed by immediate fatal hemorrhage among Europeans than among Americans, and that upon animals he had in America performed successfully operations which in England and France were impracticable because of the fatal bleeding which invariably followed the attempt.

DIAGNOSIS OF OVARIAN CYSTS BY MEANS OF THE EXAMINATION OF THEIR CONTENTS. By HENRY JACQUES GARRIGUES, A.M., M.D. New York, Wm. Wood & Co., 1882.

Those whose ambition it may be to become distinguished in the field of ovariotomy, or whose minds are inclined to research in general and the settling of vexed questions, will do well to peruse Dr. Garrigues's Diagnosis of Ovarian Cysts, where an excellent summary of the state of the case up to the present time can be found, together with much new work undertaken by the author for the purpose, if possible, of settling the matter,—since the ovarian cell has so far fallen short of certainty as a diagnostic sign by merely a hair's breadth. The author, coming to the subject with a mind unprejudiced, studied the fluid as though "there never had been written anything upon the subject." The work is well illustrated, and the so-called "Drysdale's corpuscles" are figured and described. The author's conclusion we give in his own words: "There is no pathognomonic morphological element in ovarian fluid," yet examination of ovarian fluid is "a very valuable help." While acknowledging the value of Drysdale's corpuscles as somewhat greater than Bennett's, the author considers them as "by no means pathognomonic, not even of the presence of any kind of cyst, and still less of an ovarian cyst," and has found them in cysts of the broad ligament and abdominal wall, cancer of the peritoneum, renal cyst, congestive abscess extending from the spine to the femur, and in a vaginal cyst. As other experts give a similar testimony, the question may be regarded as left by Dr. Garrigues about as found by him when he commenced his observations.

E. W. W.

GLEANINGS FROM EXCHANGES.

NEW OPERATION FOR ANCHYLOSIS OF THE JAW.—Dr. Mears presented the following case at the last meeting of the Academy of Surgery. The case was that of a young lady, 20 years of age, who had been accidentally shot when only two years old, by a playfellow. The charge consisted of small bird-shot, a few of which were still present and could be felt underneath the skin at the side of the neck. The gun was within a few feet of her face when discharged, the mass of the contents passing directly through the left side of the face, the direction being from before backward and outward. The greater part of the left cheek was torn away, including the zygoma, the malar bone, and part of the superior maxilla. Profuse bleeding followed, and a physician who was called in declined doing anything for the little patient, as, he said, she was sure to die. Her parents, being intelligent people, cleaned the wound and applied pressure, with the result not only of stopping the bleeding, but also of healing the wound, after a number of pieces of bone had been discharged. The result, however, as regards the functions of the jaw was not very good: anchylosis followed, and the jaws were bound together by a firm band of fibrous structure. For eighteen years she had been unable to eat food which required mastication; the teeth were prevented from developing, except a few, which grew to one side. The front teeth were rudimentary, and she stated that she had worn them away trying to push food into her mouth. Her voice was good, and she had just finished a collegiate course to fit her for teaching. She sought relief from the anchylosis in the hope that the defective denture might be remedied—in appearance, at least—by a double set of artificial teeth.

Dr. Mears found that the jaws were united on the left side with a firm band, fibrous or osseous, and that only a slight lateral movement existed at the articulation. There was also defective development of the bones of the left side of the face. The cicatrix on the cheek had contracted so as to draw away the lower lid and produce extensive ectropion, and the cornea had become opaque, either from the original injury or from exposure, so that the function of this eye was destroyed. The operation was completed at one sitting. A plastic operation was performed to relieve the ectropion, and in order to prevent unnecessary disfigurement, instead of making the usual line of incision to resect the jaw-bone, the knife was then carried through the cicatrix directly outward towards the lobe of the ear; the ascending ramus of the jaw-bone was then divided with the saw just below the coronoid process, and the portion of the bone above this was removed from its socket. A chain-saw was then introduced into the mouth, and the vicious band of union was divided, giving at once considerable motion to the jaw. A number of defective teeth-roots and stumps were removed, twenty-two in all; six teeth in front and on the right side were found to be good, and were allowed to remain. Six weeks after the operation the wound had healed, except a small superficial spot. The ectropion had been corrected; she was able to cover the eye completely with the lids. The jaw could be opened over an inch, and admitted lateral motion for chewing. She is now being fitted with artificial teeth; her appearance has been immensely improved. Before the operation she was obliged to wear constantly a black patch over her eye, which is no longer necessary; a veil is worn when she is out on the street, which sufficiently hides the cicatrix.

PICRIC ACID AS A TEST FOR ALBUMEN AND FOR SUGAR IN THE URINE.—Dr. George Johnson, in a communication to the *Medical Times and Gazette* (March 24), calls attention to the advantages of picric acid in clinical urinary analysis. An aqueous solution (of about one to fifty) is most convenient for home use: the dry powder or crystals may be carried in the pocket or urinary test case. The solution being added (superimposed) to an equal bulk of urine, will immediately coagulate the albumen, if present. If highly alkaline, the urine should be acidulated with acetic or muriatic acid before adding the test; but this will rarely be found necessary. The specific gravity of the saturated solution (1–50) is 1003; it therefore floats on the urine. It is a very delicate test for albumen, and has some very obvious advantages over nitric acid.

The following directions are given to apply the qualitative test for sugar:

"Take a fluidrachm of a solution of grape-sugar, in the proportion of a grain to the fluidounce, mix it with half a drachm of liquor potassæ (P. B.) and ten minims of a saturated solution of picric acid, and make up the mixture to four drachms with distilled water. The mixture is conveniently made in a boiling-tube ten inches long and three-fourths of an inch in diameter, which may be marked below at the height of two and four drachms. With a long boiling-tube there is little risk of the liquid boiling over, and the steam, condensing in the upper cool part of the tube, flows back as liquid, so that there is little loss by evaporation. The liquid is now raised to the boiling-point, and the boiling is continued for sixty seconds by the watch, so as to insure the complete reaction between the sugar and the picric acid. During the process of boiling, the pale-yellow color of the liquid is changed to a beautiful claret red."

The use of a series of standard colors for comparison will enable us to use this also as a quantitative test. The only objection to this is that it is too delicate, as it is slightly

colored by the reducing substances of normal urine.

ABDOMINAL SECTION FOR CHRONIC PERITONITIS AFTER PARTURITION.—A woman, 26 years of age, presented herself at a lying-in hospital eighteen days after confinement, with purulent discharge from the vagina, having been discharged therefrom only two days before, when she was convalescent and in good condition. On the twenty-fourth day she complained of pain in the abdomen, and two weeks later was sent to King's College Hospital, under the care of Dr. W. S. Playfair. She then had an effusion both in the peritoneal and the left pleural cavities; right-sided pleurisy and pericarditis also soon developed, but these were relieved in a few days by the usual treatment. On the forty-second day the abdomen was swollen so much as to give rise to dyspnœa and distress; it was then aspirated, and seventy-two ounces of purulent fluid obtained; a fortnight later this was repeated, on both occasions giving temporary relief, as it did again two weeks later; altogether, two hundred and twenty fluidounces were thus evacuated. A fortnight afterwards, as there was a fresh accumulation, Dr. Playfair opened the abdomen with Listerian precautions, and introduced a drainage-tube. After this the patient made rapid progress to recovery. The drainage-tube was removed five weeks later, and the wound healed within eleven days afterwards. The internal remedies used were quinine, iron, and stimulants.—*British Medical Journal.*

FORCIBLE REMOVAL OF UTERUS, AFTER LABOR, BY A MIDWIFE.—A case is reported in the *British Medical Journal*, by Dr. Cane, in which the uterus and some of its appendages were torn away by a midwife. Mrs. B., 29 years of age, in delicate health, had her first child five years previously, subsequently two miscarriages, due to acquired syphilis. Attended by a midwife, death occurred shortly after delivery. It was found upon examining the placenta, which had been removed by the midwife, that there was attached to it a mass which proved to be the inverted uterus, an inch of the upper part of the vagina, both Fallopian tubes, the right ovary, and half of the left one. The uterus appeared to be healthy and the ovaries normal.

MISCELLANY.

DR. JOHN T. SHARPLESS died on the 22d ult., of pleuro-pneumonia, at his residence in this city, aged eighty-two years. After practising medicine with much success for thirty years, he retired from practice in 1853, and travelled with his sister for over twelve years through Europe and the Holy Land. He was a native of Maryland, graduated at the University of Pennsylvania in 1823, and in his practice devoted much attention to obstetrics and diseases of women. He was elected a member of the Board of Health in 1832, and during the prevalence of cholera in this city in that year he was very active in the duties of his office.

AT A FACULTY MEETING, held April 23, Dr. Roberts Bartholow was elected Dean of Jefferson College, to succeed Dr. Wallace, who was obliged to retire on account of ill health.

PATENT MEDICINES IN ITALY.—A law has just come into force in Italy which prohibits the sale of patent medicines throughout the kingdom unless the precise composition of the medicine is stated. This important decree has been promulgated by the Minister of the Interior, the customs, and the sanitary authorities.—*Medical Times and Gazette.*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 7 TO APRIL 28, 1883.

ALEXANDER, CHARLES T., MAJOR AND SURGEON.—To be relieved from duty at the U. S. Military Academy, West Point, New York, August 28, 1883. Paragraph 6, S. O. 82, A. G. O., April 10, 1883.

WOLVERTON, WM. D., MAJOR AND SURGEON.—Granted leave of absence for four months on surgeon's certificate of disability. Paragraph 7, S. O. 85, A. G. O., April 13, 1883.

BARTHOLF, JOHN H., CAPTAIN AND ASSISTANT-SURGEON.—The extension of leave of absence for twenty-three days by S. O. 37, c. s., Department of the Columbia, further extended one month. Paragraph 1, S. O. 31, Military Division of the Pacific, April 3, 1883.

GIBSON, R. J., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at cantonment on the Uncompahgre, Colorado, and assigned to duty at Fort Hays, Kansas. Paragraph 1, S. O. 73, Department of the Missouri, April 7, 1883.

SHUFELDT, ROBERT W., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Examining Board in session in New York City, for examination for promotion, on completion of which will return to proper station. Paragraph 10, S. O. 87, A. G. O., April 16, 1883.

CLEARY, PETER J. A., MAJOR AND SURGEON.—So much of Paragraph 10, S. O. 273, November 23, 1882, from this office, as directs him (then captain and assistant-surgeon) to report in person to the commanding general, Department of Dakota, is revoked, and, upon the expiration of his present sick leave of absence, to report in person for assignment to duty in the Department of the Missouri. S. O. 95, A. G. O., April 25, 1883.

HOPKINS, WM. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Now on leave of absence in New York City, to be relieved from duty in the Department of the East, and assigned to duty in the Department of Arizona. Paragraph 7, S. O. 95, A. G. O., April 25, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING APRIL 28, 1883.

Surgeon J. B. PARKER ordered to the Torpedo Station, Newport, Rhode Island, *vice* Surgeon Wm. J. Simon, detached and waiting orders.

P. A. Surgeon M. H. SIMON detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to the Naval Hospital, Yokohama, Japan, *vice* P. A. Surgeon C. Biddle, detached and ordered to the "Richmond."

P. A. Surgeon A. A. AUSTIN detached from the "Richmond" and ordered home.

Assistant-Surgeon J. H. BRYAN ordered to report May 1, for examination for promotion.